

**SCHOOL SCIENCE FAIR
FACILITATOR
INFORMATION
PACKET**

Permian Basin Regional Science Fair

2012

Permian Basin Regional Science Fair, 2012

What? – An opportunity to win scholarships up to \$12,000, prizes (monetary and other), trips to the state and/or international science fair, and learn about science!

When? – Saturday, March 3, 2012 (Set-up is Friday, March 2, 2012)

Where? – Gymnasium building on the UT Permian Basin campus

Who? – The Junior Division is for students in grades 3, 4, and 5, with competition by grade level and category. The Intermediate Division is for students in grades 6, 7, and 8, with competition by category irrespective of grade. The Senior Division is for grades 9 through 12, with competition by category irrespective of grade.

How? – Students in grades 3 – 6 must qualify through a local (e.g., your school) fair. Other students may enter the fair directly. Contact the director for any exceptions for students whose schools do not have a local science fair.

More Information? – Contact the Fair by:

Email at: nelson_s@utpb.edu

Phone at: (432) 552-2227

Website at: <http://www.utpb.edu/scifair/>

MEMORANDUM

Date: October 26, 2012

To: School Science Fair Directors

From: Dr. Stephen O. Nelson, Director, Permian Basin Regional Science Fair

Subject: 2012 Permian Basin Regional Science Fair (PBRSF), March 3, 2012

Enclosed please find a general announcement of the Permian Basin Regional Science Fair, a set of the rules for the division(s) appropriate for the students at your school, and a copy of the International Science Fair rules, including copies of all required forms. Please read this important information carefully and **provide copies for all involved faculty** at your school. Please also fill out the enclosed School and Local Fair Information Form and return it to me.

There are, as usual, three divisions at the PBRSF: Junior (grades 3-5), Intermediate (grades 6-8), and Senior (grades 9-12). In elementary, middle, and junior high schools, students in grades 3-6 (locally, most sixth graders are in an elementary school) must qualify at a local (e.g., your school's) fair in order to enter the Regional Fair. Exceptions may be made for very small groups of students whose schools are unwilling to host a science fair of their own. Entries to the PBRSF will be accepted only from those who finish first, second, or third in their category for their grade level at your local fair. If you have a local fair, please fill in and return the attached fair information form. Finally, and very important, students who participate in the PBRSF and a local fair leading to it are subject to the same regulations as those attending the International Fair. In particular, every student presenting a project, from third grade to senior division, **must complete ALL applicable forms and receive ALL appropriate SRC/IRB approvals as described in the ISEF Rules**. We strongly recommend that all students who will enter your local fair or the PBRSF go through the ISEF rules wizard website or be given a copy of the enclosed "Student Information Packet," with all forms. The rules wizard will generate a list of necessary forms, it may be found here: <http://www.societyforscience.org/isef/students/wizard/index.asp>

Schools and local fairs may form their own Scientific Review Committee (SRC) and Institutional Review Board (IRB) as long as they are constituted in accordance with ISEF rules. If your local fair has its own SRC and IRB, please fill out the attached SRC/IRB registration form and return it to the PBRSF Director (me). If you do not have a local SRC and IRB but have projects requiring SRC or IRB approval, your students may utilize our SRC and IRB. However, since most approvals **are required PRIOR to experimentation**, the appropriate forms must be sent to the Director at the University as soon as possible so they can be reviewed before the student actually undertakes the experiment.

If you have any questions about the Fair, the conduct of student projects, requirements for entry, whatever, PLEASE contact me and I'll try to get you an answer. The rules are quite strict, as they are in the real world for scientific researchers, and we do not want any students trapped by violations that will bar their projects from the Fair. I can be reached by phone at (432) 552-2227 or by e-mail at nelson_s@utpb.edu. We also have a Web site with all relevant information at <http://www.utpb.edu/scifair/>

Overview of the Permian Basin Regional Science Fair

The Permian Basin Regional Fair (PBRSF) is an affiliated chapter of the Intel International Science and Engineering Fair (ISEF). ISEF establishes and enforces a common set of participation rules, coordinates regional science fairs primarily in the United States, but chapters exist literally around the world, and organizes an annual International Science and Engineering Fair. The Permian Basin Regional Science Fair is an independent, volunteer-operated fair, which is hosted at UT Permian Basin as a service to the community.

The PBRSF is hosted each spring, usually in March, by in the UTPB gymnasium. UT-Permian Basin has been the site host of PBRSF since at least 1985, and most of the personnel who serve as directors, chairs, and general organizers are UTPB faculty and staff. Hundreds of projects are submitted in categories distributed between three major competition levels: The Junior Division is for students in grades 3, 4, and 5; the Intermediate Division is for grades 6, 7, and 8; and the Senior Division is for grades 9, 10, 11, and 12.

All elementary, junior high, and senior high schools, public and private, in Region 18 may participate in the PBRSF. The extent of participation varies from school to school, district to district, by competition level, and the number of individual students involved. In general, there is wide participation at the Junior Division level, less competition as students get older, though the large amount of cash and scholarship prizes increases as students get older.

First, second, and third place prizes are awarded in each competitive scientific category at each grade level in the Junior Division, and in each category (independent of grade level) in the Intermediate and Senior Divisions. Students who win first, second, and third place in their categories in the Intermediate and Senior Divisions are eligible to attend the Texas State Science and Engineering Fair. Two overall grand prize winners in the Senior Division are eligible to attend the International Science and Engineering Fair.

In addition to all that students learn about science while doing their projects, participation in science fairs can lead to prizes from minor savings bonds and medals to private corporate awards in the range of \$1,000. The Fair can also serve as a major conduit in students proceeding from high schools to universities. For example, UT Permian Basin awards a scholarship worth \$1000 per semester (\$8,000 for four years) to each first-place category winner in the Senior Division who attends UT Permian Basin upon graduation from high school, and a scholarship worth \$1500 per semester (\$12,000 for four years) to each grand prize winner. Other universities do much the same, and at the state and international science fairs representatives from major universities can distribute large amounts of scholarship money to participants. Simply put, the kind of students who participate in and win science fairs are the kind of students universities very much want to have.

PERMIAN BASIN REGIONAL SCIENCE FAIR

The Permian Basin Regional Science Fair (PBRSF) will be held **SATURDAY, MARCH 3, 2012**, at the UT Permian Basin Gymnasium. Registration and set up are **FRIDAY, MARCH 2, 2012**, from 3:30 to 8:30 p.m.. Special permission for Saturday morning set up may be obtained from the fair director. Permission will be granted only if distance traveled is excessive (3 or more hours), or if an emergency situation should arise. *All judging will be conducted between 9:30 AM and 12:00 noon on Saturday, March 5.* Students *must* be present with projects in order to be judged. This information packet contains the competition categories, participation rules, entry forms, judging information, and the agenda for the Fair. *Please note that the entry_deadline will be strictly enforced.* For assistance or questions, contact the Fair Director, at (432) 552-2114 or by electronic mail at nelson_s@utpb.edu.

Junior Division Categories (grades 3 - 5)

Chemistry	Environmental Sciences	Earth and Space Sciences
Life Science	Behavioral and Social Sciences	Physics

Junior Division Awards

First, Second, and Third Place awards are given in each grade in each of the six competition categories.

Intermediate and Senior Division Categories (grades 6 – 8 and 9 - 12)

Animal Sciences	Earth and Planetary Science	Mathematical Sciences
Behavioral & Social Science	Engineering: Electrical & Mech	Medicine & Health Sciences
Biochemistry	Engineering: Materials & Bioeng	Microbiology
Cell & Molecular Biology	Energy & Transportation	Physics and Astronomy
Chemistry	Environmental Management	Plant Sciences
Computer Science	Environmental Sciences	“Team”

Intermediate and Senior Division Awards

First, Second, and Third Place awards are given in each of the eighteen competition categories. Award winners in both divisions qualify for the Texas State Science and Engineering Fair. Two outstanding Senior Division individual projects will be selected to represent the PBRSF as Finalists at the 2012 International Science and Engineering Fair in Pittsburgh, PA, May 13-18 2012. The two individual winners will be offered scholarships by UTPB worth \$2000 per year each. The alternate will be offered a \$2000 per year scholarship by the University. First place winners Senior Division category winners will also be offered scholarships to UT Permian Basin.

Special Awards

A variety of awards will be independently given by scientific societies, associations, industries, and government agencies, to those projects (Junior, Intermediate, and Senior divisions) which meet the donors' qualifications and which are judged to merit recognition.

ENTRY DEADLINE: February 3, 2012

*******Entry fee: \$20.00 per project*******

**Forms and entry fee must be sent to:
Permian Basin Regional Science Fair
4901 E. University
Odessa, Texas 79762**

(make checks payable to Permian Basin Regional Science Fair)

For confirmation of entry, include a self-addressed, stamped envelope or postcard.

PBRSF SENIOR DIVISION PARTICIPATION RULES

I. A student may do one project in any of the 17 individual competition categories. An individual project must be the student's own work. Team projects produced by no more than three students may also be entered. No student may enter as an individual *and* as a team member. Team projects will be judged as a separate category, competing with all other team projects. The students working on a team project must be from the same school. All projects and exhibits must be entirely the work of the student(s); however, advice and technical assistance may be sought from qualified persons.

II. The identical repetition of a previous year's work is not permitted. However, a student may exhibit continuing research of a problem studied in previous years if significant progress has been made. The previous year's Summary and results must be sent in with this year's entry *and* be made available for the judges at the Fair.

III. Exhibit space is limited to 75 cm (30 inches) deep, front to back; 122 cm (48 inches) wide, side to side; and 270 cm (108 inches) high, floor to top. [Tables furnished are 75 cm (30 inches) high.] Any exhibit exceeding these dimensions will be disqualified.

IV. In addition to **all required ISEF forms**, two items must be submitted for each project:

1. **ENTRY FORM, PERMIAN BASIN REGIONAL SCIENCE FAIR 2012.** This is our own form, specific to registering at the Permian Basin Regional Science Fair.

2. **PROJECT SUMMARY.** Make two copies; send one, keep one to be displayed on the exhibit. The Summary should have a heading at the top of the page with the student's name(s), grade, project competition category, school name and sponsor's name.

The Project Summary should include the project title and a description of the project, including:

1. Purpose of the project
2. Hypothesis
3. Procedures/Experiments
4. Results
5. Conclusions

The Summary should be typed or neatly written by the student on typing or notebook paper. One copy of the summary is to be sent with the Entry Form. This copy will be reviewed by the PBRSF Scientific Review Committee for compliance with the rules. A second copy of the Summary is to be attached to the exhibit. To receive confirmation of entry by PBRSF, include a self-addressed, stamped envelope or postcard with entry.

V. Projects will be accepted in the Senior Division **ONLY** if all International Science and Engineering Fair rules are followed. This includes completing **all** required ISEF forms for research involving humans, any other vertebrate research (this includes fish, mammals, reptiles, amphibians, and birds), or research using human or non-human animal tissue. Similarly, projects which involve pathogenic agents, controlled substances, recombinant DNA, or hazardous substances or devices, require the completion of one or more special forms. Explicit rules that must be followed and the forms that must be submitted are included in this package. If there are any questions about these rules or forms, call the Fair Director **before** beginning the project. A ruling will be made by the Scientific Review Committee. All projects involving human subjects, and some others – see the rules, require review by an Institutional Review Board **prior to beginning the experiment**.

VI. Project displays must conform to the rules listed on the next page. Please note there have been some changes from past regulations. Basically, if it is or has ever been alive, if it is or could be dangerous, or if it shows bad scientific practice, **DO NOT BRING IT TO THE FAIR.** Check the listing for specifics and exceptions.

Display and Safety Regulations

The following are **unacceptable for display**. (They are not allowed on the project or in the booth.)

- living organisms (including plants and microorganisms)
- plant materials in their raw, unprocessed, or non-manufactured state (exception: manufactured construction materials used in building the display)
- taxidermy specimens or parts
- preserved vertebrate or invertebrate animals
- human or animal food
- human/animal parts or body fluid (blood, urine) (exceptions: teeth, hair, nails, dried animal bones, histological dry mount sections, and completely sealed wet mount tissue slides)
- soil or waste samples, unless sealed permanently in a slab of acrylic
- laboratory/household chemicals, including water (exceptions: amounts integral to an enclosed apparatus.)
- poisons, drugs, controlled substances, hazardous substances or devices (for example: firearms, weapons, ammunition, loading devices)
- dry ice or other sublimating solids
- sharp items (for example: syringes, needles, pipettes, knives)
- flames or highly flammable display materials
- empty tanks that previously held combustible liquids or gases, unless certified as having been purged with CO₂
- batteries with open top cells
- awards, medals, business cards, flags, etc.
- personal information such as postal, web, and email address, phone and fax numbers (exception: information about the the experimenter(s) may appear)
- photographs or visual depictions of identifiable or recognizable people (exception: the experimenter(s), photos taken by the experimenter(s), photos for which credit is displayed)
- photographs or other visual presentations depicting vertebrate animals in surgical techniques, dissections, necropsies, other lab techniques, improper handling or housing conditions, etc.
- active Internet or email connections as part of displaying or operating the project

The following are acceptable for **display only** but cannot be operated:

- projects with unshielded belts, pulleys, chains, and moving parts with tension or pinch points
- class III and IV lasers

The following are acceptable for display, **with restrictions**:

- class II lasers – must be student operated, must post sign reading : “Laser Radiation: Do Not Stare Into Beam”, must have protective housing which prevents access to beam, must be disconnected when not being operated
- large vacuum tubes or dangerous ray-generating devices must be properly shielded
- pressurized tanks that contained non-combustibles may be allowed if properly secured
- any apparatus producing temperatures that will cause physical burns must be adequately insulated
- high-voltage (over 12 volts) equipment must be shielded with a grounded metal box or cage to prevent accidental contact
- high-voltage wiring, switches, and metal parts must have adequate insulation and overload safety devices and must be inaccessible to others
- to reach electrical outlets, must provide an extension cord with sufficient carrying capacity and certified by Underwriters Laboratories
- bare wire and exposed knife switches may be used in circuits of 12 volts or less; otherwise, standard enclosed switches are required
- handouts to public and judges must be limited to one official copy of the project abstract

PBRSF JUNIOR DIVISION PARTICIPATION RULES

I. A student may do one project in any of the (six) competition categories. This may be either an Individual project or a team project. An Individual project must be the student's own work. A team project is a single project produced by no more than two students. The students working on a team project must be from the same school and in the same grade. The project and exhibit must be entirely the work of the students; however, the students may seek advice and technical assistance from qualified persons. Students in grades 3 - 5 must have placed in the top three of their category grade level at a local science fair to be eligible for the PBRSF.

II. The identical repetition of a previous year's work is not permitted. However, a student may exhibit continuing research of a problem studied in previous years if significant progress has been made. The previous year's Summary and results must be sent in with this year's entry *and* be made available for the judges at the Fair.

III. Exhibit space is limited to 75 cm (30 inches) deep, front to back; 122 cm (48 inches) wide, side to side; and 270 cm (108 inches) high, floor to top. [Tables furnished are 75 cm (30 inches) high.] Any exhibit exceeding these dimensions will be disqualified.

IV. In addition to **all required ISEF forms**, two items must be submitted for each project:

1. **ENTRY FORM, PERMIAN BASIN REGIONAL SCIENCE FAIR 2012.** This is our own form, specific to registering at the Permian Basin Regional Science Fair.

2. **PROJECT SUMMARY** - make two copies; send one, keep one to be displayed on the exhibit. The Summary should have a heading at the top of the page with the student's name(s), grade, project competition category, school name and sponsor's name. The Summary should include the project title and a description of the project, including:

1. Purpose of the project
2. Hypothesis
3. Procedures/Experiments
4. Results
5. Conclusions

The Summary should be typed or neatly written by the student on typing or notebook paper. One copy of the Summary is to be sent with the Entry Form. This copy will be reviewed by the PBRSF Scientific Review Committee for compliance with the rules. A second copy of the Summary is to be attached to the exhibit. To receive confirmation of entry by PBRSF, include a self-addressed, stamped envelope or postcard with entry.

V. Projects that involve vertebrate animals will be accepted in the Junior Division **ONLY** if all International Science and Engineering Fair rules are followed. This includes completing **all** required ISEF forms for research involving humans, any other vertebrate research (this includes fish, mammals, reptiles, amphibians, and birds), or research using human or non-human animal tissue. Similarly, projects that involve pathogenic agents, controlled substances, recombinant DNA, or hazardous substances or devices require the completion of one or more special forms. Explicit rules that must be followed and the forms that must be submitted are included in this package. If there are any questions about these rules, call the Fair Director before beginning the project. A ruling will be made by the Scientific Review Committee.

VI. Project displays must conform to the rules listed on the next page. Please note there have been some changes from past regulations. Basically, if it is or has ever been alive, if it is or could be dangerous, or if it shows bad scientific practice, **DO NOT BRING IT TO THE FAIR.** Check the listing for specifics and exceptions.

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- plant materials in their raw, unprocessed, or non-manufactured state (exception: manufactured construction materials used in building the display)
- taxidermy specimens or parts
- preserved vertebrate or invertebrate animals
- human or animal food
- human/animal parts or body fluid (blood, urine) (exceptions: teeth, hair, nails, dried animal bones, histological dry mount sections, and completely sealed wet mount tissue slides)
- soil or waste samples, unless sealed permanently in a slab of acrylic
- laboratory/household chemicals, including water (exceptions: amounts integral to an enclosed apparatus.)

- poisons, drugs, controlled substances, hazardous substances or devices (for example: firearms, weapons, ammunition, loading devices)
- dry ice or other sublimating solids
- sharp items (for example: syringes, needles, pipettes, knives)
- flames or highly flammable display materials
- empty tanks that previously held combustible liquids or gases, unless certified as having been purged with CO₂
- batteries with open top cells
- awards, medals, business cards, flags, etc.
- personal information such as postal, web, and email address, phone and fax numbers (exception: information about the the experimenter(s) may appear)
- photographs or visual depictions of identifiable or recognizable people (exception: the experimenter(s), photos taken by the experimenter(s), photos for which credit is displayed)
- photographs or other visual presentations depicting vertebrate animals in surgical techniques, dissections, necropsies, other lab techniques, improper handling methods or housing conditions, etc.
- active Internet or email connections as part of displaying or operating the project

The following are acceptable for **display only** but cannot be operated:

- projects with unshielded belts, pulleys, chains, and moving parts with tension or pinch points
- class III and IV lasers

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- pressurized tanks that contained non-combustibles may be allowed if properly secured
- any apparatus producing temperatures that will cause physical burns must be adequately insulated
- high-voltage (over 12 volts) equipment must be shielded with a grounded metal box or cage to prevent accidental contact
- high-voltage wiring, switches, and metal parts must have adequate insulation and overload safety devices and must be inaccessible to others
- to reach electrical outlets, must provide an extension cord with sufficient carrying capacity and certified by Underwriters Laboratories
- bare wire and exposed knife switches may be used in circuits of 12 volts or less; otherwise, standard enclosed switches are required
- handouts to public and judges must be limited to one official copy of the project abstract

PBRSF INTERMEDIATE DIVISION PARTICIPATION RULES

I. A student may do one project in any of the 17 individual competition categories. An individual project must be the student's own work. Team projects produced by no more than three students may also be entered. No student may enter as an individual *and* as a team member. Team projects will be judged as a separate category, competing with all other team projects. The students working on a team project must be from the same school. All projects and exhibits must be entirely the work of the student(s); however, advice and technical assistance may be sought from qualified persons. *Students in the sixth grade must qualify by placing first, second, or third at a local(school) fair.*

II. The identical repetition of a previous year's work is not permitted. However, a student may exhibit continuing research of a problem studied in previous years if significant progress has been made. The previous year's Summary and results must be sent in with this year's entry *and* be made available for the judges at the Fair.

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The Summary should be typed or neatly written by the student on typing or notebook paper. One copy of the summary is to be sent with the Entry Form. This copy will be reviewed by the PBRSF Scientific Review Committee for compliance with the rules. A second copy of the Summary is to be attached to the exhibit. To receive confirmation of entry by PBRSF, include a self-addressed, stamped envelope or postcard with entry.

V. Projects will be accepted in the Intermediate Division ONLY if all International Science and Engineering Fair rules are followed. This includes completing **all** required ISEF forms for research involving humans, any other vertebrate research (this includes fish, mammals, reptiles, amphibians, and birds), or research using human or non-human animal tissue. Similarly, projects that involve pathogenic agents, controlled substances, recombinant DNA, or hazardous substances or devices, require the completion of one or more special forms. Explicit rules that must be followed and the forms that must be submitted are included in this package. If there are any questions about these rules or forms, call the Fair Director **before** beginning the project. A ruling will be made by the Scientific Review Committee. All projects involving human subjects, and some others – see the rules, require review by an Institutional Review Board **prior to beginning the experiment**

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- preserved vertebrate or invertebrate animals
- human or animal food
- human/animal parts or body fluid (blood, urine) (exceptions: teeth, hair, nails, dried animal bones, histological dry mount sections, and completely sealed wet mount tissue slides)
- soil or waste samples, unless sealed permanently in a slab of acrylic
- laboratory/household chemicals, including water (exceptions: amounts integral to an enclosed apparatus.)
- poisons, drugs, controlled substances, hazardous substances or devices (for example: firearms, weapons, ammunition, loading devices)
- dry ice or other sublimating solids
- sharp items (for example: syringes, needles, pipettes, knives)
- flames or highly flammable display materials
- empty tanks that previously held combustible liquids or gases, unless certified as having been purged with CO₂
- batteries with open top cells
- awards, medals, business cards, flags, etc.
- personal information such as postal, web, and email address, phone and fax numbers (exception: information about the the experimenter(s) may appear)
- photographs or visual depictions of identifiable or recognizable people (exception: the experimenter(s), photos taken by the experimenter(s), photos for which credit is displayed)
- photographs or other visual presentations depicting vertebrate animals in surgical techniques, dissections, necropsies, other lab techniques, improper handling methods or housing conditions, etc.
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- pressurized tanks that contained non-combustibles may be allowed if properly secured
- any apparatus producing temperatures that will cause physical burns must be adequately insulated
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- high-voltage wiring, switches, and metal parts must have adequate insulation and overload safety devices and must be inaccessible to others
- to reach electrical outlets, must provide an extension cord with sufficient carrying capacity and certified by Underwriters Laboratories
- bare wire and exposed knife switches may be used in circuits of 12 volts or less; otherwise, standard enclosed switches are required
- handouts to public and judges must be limited to one official copy of the project abstract

Senior Division Entry Form

Permian Basin Regional Science Fair 2012

PLEASE Type or print in black or blue ink

Student's Name _____ Phone _____

Student's Address _____

Grade 9 10 11 12

School _____

City _____

Project Title _____

Please Check One

My Project Category is:

- | | | |
|--|--|---|
| <input type="checkbox"/> Animal Sciences | <input type="checkbox"/> Earth and Planetary Science | <input type="checkbox"/> Mathematical Sciences |
| <input type="checkbox"/> Behavioral/Social Science | <input type="checkbox"/> Engineering: Electrical & Mechanical | <input type="checkbox"/> Medicine & Health Sciences |
| <input type="checkbox"/> Biochemistry | <input type="checkbox"/> Engineering: Materials & Bioengineering | <input type="checkbox"/> Microbiology |
| <input type="checkbox"/> Cell/Molecular Biology | <input type="checkbox"/> Energy & Transportation | <input type="checkbox"/> Physics & Astronomy |
| <input type="checkbox"/> Chemistry | <input type="checkbox"/> Environmental Management | <input type="checkbox"/> Plant Sciences |
| <input type="checkbox"/> Computer Science | <input type="checkbox"/> Environmental Science | <input type="checkbox"/> "Team" |

Check List:

- I enclose a Project Summary and a \$20 entry fee.
- This is a group project. The forms for the other members of the group are enclosed.
- I will need electricity. (Available only if requested.)
- This is a continuing project; summary from previous year (s) is enclosed.
- I enclose ISEF Forms 1, 1A, Research Plan, 1B, and an abstract.
- I worked in an institutional or industrial setting, so I enclose ISEF form 1C.

My Project Involved:

- Human subjects (requires prior IRB approval; I have enclosed completed ISEF Form 4 and, as required, 2)
- Vertebrate animals (requires prior SRC approval, I have enclosed completed ISEF Forms 2 and either 5A or 5B)
- Potentially hazardous biological agents (requires prior SRC approval, I have enclosed completed ISEF Forms 6A and, as applicable, 2, and 6B)
- Hazardous chemicals, activities, or devices (I have enclosed completed ISEF Form 3 and, as applicable, 2)

I have read the rules of the 2012 International Science and Engineering Fair and will abide by these rules. I realize that the decisions of the judges and officials of the Permian Basin Regional Fair will be FINAL.

Student's signature _____

Sponsor's signature _____

Sponsor's name (print) _____ Phone _____

Entry Form Deadline: February 3, 2012
Registration/Set-up: Friday, March 2, 2012 afternoon
Judging/Awards: Saturday, March 3, 2012, all day

Junior Division Entry Form

Permian Basin Regional Science Fair 2012

PLEASE Type or print in black or blue ink

Student's Name _____ Phone _____

Student's Address _____

Grade 3 4 5

School _____

City _____

Project Title _____

For my grade and school shown above, I certify that I am a 1st, 2nd, or 3rd place winner in:

Please Check One

- Behavioral/Social Science Environmental Science Life Science
 Earth/Space Science Mathematics/Physics Chemistry

Check List:

- I enclose a Project Summary and a \$20 entry fee.
 This is a group project. The forms for the other members of the group are enclosed.
 I will need electricity. (Available only if requested.)
 This is a continuing project; summary from previous year (s) is enclosed.
 I enclose ISEF Forms 1, 1A, Research Plan, 1B, and an abstract.
 I worked in an institutional or industrial setting, so I enclose ISEF form 1C.

My Project Involved:

- Human subjects (requires prior IRB approval; I have enclosed completed ISEF Form 4 and, as required, 2)
 Vertebrate animals (requires prior SRC approval, I have enclosed completed ISEF Forms 2 and either 5A or 5B)
 Potentially hazardous biological agents (requires prior SRC approval, I have enclosed completed ISEF Forms 6A and, as applicable, 2, and 6B)
 Hazardous chemicals, activities, or devices (I have enclosed completed ISEF Form 3 and, as applicable, 2)

I have read the rules of the 2012 International Science and Engineering Fair and will abide by these rules. I realize that the decisions of the judges and officials of the Permian Basin Regional Fair will be FINAL.

Student's signature _____

Sponsor's signature _____

Sponsor's name (print) _____ Phone _____

Entry Form Deadline: February 3, 2012
Registration/Set-up: Friday, March 2, 2012, afternoon
Judging/Awards: Saturday, March 3, 2012, all day

Intermediate Division Entry Form

Permian Basin Regional Science Fair 2012

PLEASE Type or print black or blue ink

Student's Name _____ Phone _____

Student's Address _____

Grade 6 7 8

School _____

City _____

Project Title _____

Please Check One My Project Category is:

- | | | |
|--|--|---|
| <input type="checkbox"/> Animal Sciences | <input type="checkbox"/> Earth and Planetary Science | <input type="checkbox"/> Mathematical Sciences |
| <input type="checkbox"/> Behavioral/Social Science | <input type="checkbox"/> Engineering: Electrical & Mechanical | <input type="checkbox"/> Medicine & Health Sciences |
| <input type="checkbox"/> Biochemistry | <input type="checkbox"/> Engineering: Materials & Bioengineering | <input type="checkbox"/> Microbiology |
| <input type="checkbox"/> Cell/Molecular Biology | <input type="checkbox"/> Energy & Transportation | <input type="checkbox"/> Physics & Astronomy |
| <input type="checkbox"/> Chemistry | <input type="checkbox"/> Environmental Management | <input type="checkbox"/> Plant Sciences |
| <input type="checkbox"/> Computer Science | <input type="checkbox"/> Environmental Science | <input type="checkbox"/> "Team" |

Check List:

- I enclose a Project Summary and a \$20 entry fee.
- This is a group project. The forms for the other members of the group are enclosed.
- I will need electricity. (Available only if requested.)
- This is a continuing project; summary from previous year (s) is enclosed.
- I enclose ISEF Forms 1, 1A, Research Plan, 1B, and an abstract.
- I worked in an institutional or industrial setting, so I enclose ISEF form 1C.

My Project Involved:

- Human subjects (requires prior IRB approval; I have enclosed completed ISEF Form 4 and, as required, 2)
- Vertebrate animals (requires prior SRC approval, I have enclosed completed ISEF Forms 2 and either 5A or 5B)
- Potentially hazardous biological agents (requires prior SRC approval, I have enclosed completed ISEF Forms 6A and, as applicable, 2, and 6B)
- Hazardous chemicals, activities, or devices (I have enclosed completed ISEF Form 3 and, as applicable, 2)

I have read the rules of the 2012 International Science and Engineering Fair and will abide by these rules. I realize that the decisions of the judges and officials of the Permian Basin Regional Fair will be FINAL.

Student's signature _____

Sponsor's signature _____

Sponsor's name (print) _____ Phone _____

Entry Form Deadline: February 3, 2012
Registration/Set-up: Friday, March 2, 2012, afternoon
Judging/Awards: Saturday, March 3, 2012, all day

2012 PERMIAN BASIN REGIONAL SCIENCE FAIR

School and Local Fair Information Form

Name of School/Local Fair: _____

Fair Director's Name: _____

Mailing Address: Street _____

City, State, Zip _____

Home phone: (____) - _____

Business phone: (____) - _____

FAX phone: (____) - _____

Email address: _____

City and county where school is located and/or fair will be held:

Date(s) of fair: _____

**Scientific Review Committee (SRC) and Institutional Review Board (IRB)
Registration, 2012**

School/Local Fair: _____

Director: _____

Director phone: _____

1) Chairperson: _____ **Field of Study:** _____

Degree(s) and/or Qualification: _____

Institutional Affiliation: _____

Mailing address: (street) _____

(city) _____ (state) ____ (zip) _____

Phone: (____) _____ email: _____

2) Member: _____ **Field of Study:** _____

Degree(s) and/or Qualification: _____

Institutional Affiliation: _____

Mailing address: (street) _____

(city) _____ (state) ____ (zip) _____

Phone: (____) _____ email: _____

3) Member: _____ **Field of Study:** _____

Degree(s) and/or Qualification: _____

Institutional Affiliation: _____

Mailing address: (street) _____

(city) _____ (state) ____ (zip) _____

Phone: (____) _____ email: _____

The SRC must have at least three members. One member must be a biomedical scientist (Ph.D., M.D., D.O., D.V.M., D.D.S.), one a science teacher, and at least one must be familiar with animal care procedures. If the SRC serves also as the IRB, one member must be a psychologist or a psychiatrist. Please return to the Permian Basin Regional Science Fair, 4901 E. University, Odessa, TX 79762 ASAP.

ISEF Web Resources

There are at least four resources available from the ISEF Web site that will be very helpful in the conduct of your project. The ISEF site for this information is

<http://www.sciserv.org/isef/rules.asp>

At that site, you will find:

Intel ISEF Rules Wizard – The wizard asks you questions about your project and provides a list of forms you will need.

Clarification for Forms and Dates – A list of all the ISEF forms, with an explanation of each form's purpose and when during your project you need to complete the form.

Common SRC Problems – A list of problems identified by past ISEF SRC reviews. A good place to find out about things you should not do.

International Rules and Guidelines – the whole set of rules, in .html and in downloadable formats.

All the forms are also available at the site for downloading and printing.

The Handy-Dandy “READ-THIS-Before-You-Start-Anything” Checklist

There are a few things you need to consider before you even begin the study leading to your completed Science Fair project. In order to guide you through these preliminaries, please step through the checklist below. All ISEF forms referenced are available for downloading or you can get them from your local fair director. All forms mentioned are official ISEF forms except for the PBRSF Entry Form, and all are available from your teacher or on the PBRSF Website at <http://www.utpb.edu/scifair/>

Whatever your project is, your entry packet for the PBRSF **must** contain:

Entry Form, Permian Basin Regional Science Fair 2012

Checklist for Adult Sponsor (1)

Student Checklist (1A)

Research Plan (must accompany Student Checklist 1A) This is something you write yourself according to the guidelines on page 31 of the 2012 International Rules and Guidelines, **NOT** just attach a photocopy of the guidelines on page 31.

Approval Form (1B)

Abstract (in the official ISEF format)

If your experiment is such that it requires you to work in an institutional (a University laboratory, for example) or industrial (a laboratory at a refinery or a medical scientist’s office) setting, you are **required** to include

Regulated Research Institutional/Industrial Setting Form (1C)

If your project is a continuation of a previous one, you must submit

Continuation Projects Form (7)

If your project involves anything that is or has ever been alive or makes use of anything that is even potentially dangerous, you must take several additional steps and submit further information. To see what the specific requirements are, go to the corresponding sections on the following pages. All of the following require special forms in addition to those mentioned above, and most require approval of a Scientific Review Committee (SRC) or an Institutional Review Board (IRB) **before the start of the project.**

Human Subjects

Non-human Vertebrate Animals

Recombinant DNA

Pathogens

Controlled Substances

Human or Non-human Animal Tissue

Hazardous Substances or Devices

Human subjects

If your project involves human subjects, even if they are only being asked some questions, you are required to get approval from an Institutional Review Board (IRB) **BEFORE** you even start the experiment. You are **required** to submit to the IRB, in addition to the basic forms (1, 1A, Research Plan, 1B, and, if required, 1C)

Qualified Scientist Form (2)

Human Subjects Form (4)

In the middle of Form 4, you will see a list of possible categories into which your experiment will be put by the IRB and the forms suggested or required based on the IRB findings. *It is not up to you, your parents, or your teacher to decide the level of risk involved in your experiment.* If you intend to use humans in your experiment, you **must** submit the forms listed above to an IRB for a decision as to appropriateness and level of risk before you begin your experiment. Form 4 now includes an informed consent section, bottom left, replacing the old form 4B.

Vertebrate Animals

If your project involves non-human vertebrates, including your dog, you must seek approval of your project from the Scientific Review Committee (SRC) **BEFORE** you even start your experiment. You are **required** to submit to the SRC, in addition to the basic forms (1, 1A, Research Plan, 1B, and, if required, 1C)

Qualified Scientist Form (2)

Vertebrate Animal Form (5A) is sufficient if you are merely observing an animal's behavior, conducting nutritional studies (e.g., dog food brand preferences), or similarly non-invasive measurements that do not threaten harm and may be conducted at home or school. Signatures by a veterinarian and designated supervisor may still be required.

Vertebrate Animal Form (5B) is required, however, if you doing something really gruesome to that poor creature; see the rather detailed list of "permitteds" and "prohibiteds" in Section B, pp. 18-19 of the International Rules & Guidelines.

Potentially Hazardous Biological Agents

If your project involves any kind of microorganisms (bacteria, fungi, viruses, parasites, etc.), recombinant DNA, or fresh tissues, blood, or body fluids, you must seek approval of your project from the Scientific Review Committee (SRC) **BEFORE** you even start your experiment. You are **required** to submit to the SRC, in addition to the basic forms (1, 1A, Research Plan, 1B, and, if required, 1C)

Qualified Scientist Form (2) if applicable

Potentially Hazardous Biological Agents Form (6A)

Human and Vertebrate Animal Tissue Form (6B) for studies using tissues and body fluids.

Human or Vertebrate Animal Tissue

If your project involves human or non-human animal tissue, you must seek approval of your project from the Scientific Review Committee (SRC) **BEFORE** you even start your experiment. Several types of tissue are exempt from this requirement, and do not need prior SRC approval or Form 6. Types exempt include plant tissue, cell and tissue cultures obtained, e.g., from the American Type Culture Collection (identify source), meat and meat by-products obtained from food stores, restaurants, or packing houses, and hair. You are **required** to submit to the SRC, in addition to the basic forms (1, 1A, Research Plan, 1B, and, if required, 1C)

Potentially Hazardous Biochemical Agents Form (6A)

Human and Vertebrate Animal Tissue Form (6B)

Qualified Scientist Form (2) and **Risk Assessment Form (3)** if applicable

Hazardous Chemicals, Activities, or Devices

If your project involves hazardous substances or devices, such as hazardous chemicals, firearms or ammunition, laser devices, radioactive sources, or heating devices you are not required to seek prior SRC approval. However, in your entry packet, you are **required** to submit to the SRC, in addition to the basic forms (1, 1A, Research Plan, 1B, and, if required, 1C)

Qualified Scientist Form (2) if applicable

Risk Assessment Form (3)

ISEF Definitions

Adult Sponsor – may be a teacher, parent, university professor, or scientist in whose lab the student works. This individual must have a solid background in science and should have close contact with the student during the course of the project.

Designated Supervisor – is an adult who supervises a student's experiment. The Designated Supervisor need not have an advanced degree, but should be thoroughly familiar with the student's project, and must be trained in the student's area of research.

Qualified Scientist – should possess an earned doctoral or professional degree in the biomedical sciences. A master's degree with equivalent experience or expertise is acceptable when approved by a Scientific Review Committee (SRC). The Qualified Scientist must be thoroughly familiar with the local, state, and federal regulations that govern the student's area of research.

Institutional Review Board – a committee that, according to federal law, must evaluate the potential physical or psychological risk of research involving human subjects. The IRB must have a minimum of three members, to include at least

- a science teacher

- school administrator

- one of the following: psychologist, psychiatrist, medical doctor, or registered nurse

Scientific Review Committee – must consist of a minimum of three members, including

- a biomedical scientist (Ph.D., M.D, D.O., D.V.M., or D.D.S.)

- a science teacher

- at least one other member

PERMIAN BASIN REGIONAL SCIENCE FAIR

SCHEDULE OF EVENTS

Friday, March 2, 2012

3:30 pm -- 8:30 pm

- Check in at UT Permian Basin Gymnasium
- Set up exhibits at assigned spaces -- a copy of Summary or Abstract must be attached to each exhibit.
- After exhibits are set up, Science Fair officials will carry out a “safety check.” Prohibited items may be removed from exhibits.

Saturday, March 3, 2012

7:00 am -- 9:00 am

- Final set up for exhibits, by prior permission only.

9:00 am -- 9:30 am

- Pre-judging -- exhibit areas closed except for judges and PBRSF officials.

9:30 am -- 12:00 pm

- Judging -- all students must be present.
- Exhibit areas open only to student exhibitors, judges, and PBRSF officials.

12:00 pm -- 1:30 pm

- Lunch Break --- exhibits closed

1:30 pm -- 2:30 pm

- Exhibit areas open for public viewing of exhibits --- all students should be present.

2:30 -- 4:00

- Awards ceremony
- Exhibit areas open only to media representatives and PBRSF officials.

4:00 -- 5:00

- Take down and removal of all exhibits

PERMIAN BASIN REGIONAL SCIENCE FAIR CALENDAR AND CHECKLIST

- October** Choose a project, check for forms requiring prior approval of SRC/IRB
- November** Begin work, data collection
- December** Start work on your exhibit/backdrop.
- January** Write up the work, including a summary of the project
- February 3** **DEADLINE FOR ENTRY TO BE RECEIVED BY PBRSF**
Send entry form, required ISEF forms, summary, and \$20.00 to:

Permian Basin Regional Science Fair
University of Texas - Permian Basin
4901 E. University
Odessa, Texas 79762
- March 4** Register at UTPB gym, 3:30 p.m. -- 8:30 p.m., set up exhibit
- March 5** Arrive at UTPB gym, 9:15 a.m., for judging