

Harlingen Irrigation District  
Cameron County

Presents the

# Texas Irrigation Expo 2010 Science Fair

Thursday-Friday, October 21-22, 2010

8:00am - 5:00pm

Rio Grande Valley Livestock Show Grounds

Mercedes, Texas

**Science Fair Project Set Up may begin at 3:00 pm-Oct. 20, 2010**

Judging begins at 8:00 am - Oct. 21, 2010

Science Fair Awards Celebration at 5:00 pm - Oct. 21, 2010

Hosted by the  
Harlingen Irrigation District, Cameron County  
Texas Water Development Board  
Texas AgriLIFE Extension, Texas A&M System

# Table of Contents

Applicable Scientific Disciplines.....	Page 3
Display and Safety Regulations.....	Page 4
Judges Score Sheet.....	Page 7

## **Forms**

Application.....	Page 9
Participant Waiver.....	Page 10
Photo Release.....	Page 12

# Divisions and Categories

## **Sciences**

Agricultural Sciences  
Biology  
Chemistry  
Earth & Environmental Sciences (Soil, Water, Air)  
Physics

## **Technology**

Industrial Technology  
Computer Aided Technology  
Web Based

## **Engineering**

Agricultural  
Computer  
Mechanical  
Environmental  
Civil/Architectural

## **Contestant Categories**

**Team (2 to 4 youths)**

**Individual (1 youth)**

## **Youth Ages**

**10 to 18 years old (Middle and High School Age)**

# Display and Safety Regulations

*Please address any questions regarding Display and Safety Regulations to:*

Irrigation Expo Science Fair

Heather Jones

Harlingen Irrigation District

301 E. Pierce

Harlingen, TX 78550

[hjones@hidcc1.org](mailto:hjones@hidcc1.org)

956-423-7015 (Voice)

956-423-3178 (Fax)

## General Requirements

The Harlingen Irrigation District is the final authority on display and safety issues for projects competing in the Irrigation Expo Science Fair. Occasionally, the Harlingen Irrigation District may require students to make revisions in their displays to conform to display and safety regulations.

## Project Specifications

Depth (front to back): 15 inches or 38 centimeters

Width (side to side): 36 inches or 92 centimeters

Height (tabletop to top of display): 54 inches or 137 centimeters

Fair-provided tables will not exceed a height of 36 inches (91 centimeters)

Total project space provided at fair to display work will not exceed: 10 feet x 10 feet

Maximum project sizes include all project materials and supports. Any project with a component that will be demonstrated must be demonstrated only within the confines of the booth. When not being demonstrated, the component plus the project must not exceed allowed dimensions.

Freestanding display must be positioned on the table.

## Not Allowed at the Project

1. Living organisms, including plants
2. Taxidermy specimens or parts
3. Preserved vertebrate or invertebrate animals
4. Human or animal food
5. Human/animal parts or body fluids (for example, blood, urine)
6. Plant materials (living, dead, or preserved) that are in their raw, unprocessed, or non-manufactured state (Exception: manufactured construction materials used in building the project or display)
7. All chemicals including water (Exceptions: water integral to an enclosed)
8. All hazardous substances or devices (for example, poisons, drugs, firearms, weapons, ammunition, reloading devices, and lasers)
9. Dry ice or other sublimating solids
10. Sharp items (for example, syringes, needles, pipettes, knives)

11. Flames or highly flammable materials
12. Batteries with open-top cells
13. **Awards, medals, business cards, flags, logos, and/or endorsements** (graphic or written) unless the item(s) are an integral part of the project
14. Photographs or other visual presentations depicting vertebrate animals in surgical techniques, dissections, necropsies, or other lab procedures
15. Active Internet or e-mail connections
16. Glass or glass objects unless deemed by Irrigation Expo Science Fair representatives to be an integral and necessary part of the project (Exception: glass that is an integral part of a commercial product such as a computer screen)
18. Any apparatus deemed unsafe by the Irrigation Expo Science Fair representatives (for example, large vacuum tubes or dangerous ray-generating devices, empty tanks that previously contained combustible liquids or gases, pressurized tanks, etc.)
19. Devices requiring electrical outlets

Allowed at Project or in Booth BUT with the Restrictions Indicated

1. Soil, sand, rock, and/or waste samples **if permanently encased in a slab of acrylic**
2. Postal addresses, World Wide Web and e-mail addresses, telephone and fax numbers
3. Photographs and/or visual depictions **if**:
  - a. They are not deemed offensive or inappropriate by Texas Irrigation Expo representatives. This includes, but is not limited to, visually offensive photographs or visual depictions of invertebrate or vertebrate animals including humans. The decision by TAMUK STEM Fair representatives is final.
  - b. They have credit lines of origin ("Photograph taken by..." or "Image taken from..."). If all photographs being displayed were taken by the participant or are from the same source, one credit line prominently and vertically displayed is sufficient.
  - c. They are from the Internet, magazines, newspapers journals, etc., and credit lines are attached. (If all photographs/images are from the same source, one credit prominently and vertically displayed is sufficient.)
  - d. They are photographs or visual depictions of the participant.
  - e. They are photographs containing human subjects for which signed consent forms are at the project or in the booth.
4. Any apparatus with unshielded belts, pulleys, chains, or moving parts with tension or pinch points **if for display only and not operated.**
5. Class II lasers **if**:
  - a. The output energy is <1 mW and is operated only by the participant.
  - b. Operated only during judging.
  - c. Labeled with a sign reading "**Laser Radiation: Do Not Look into Beam**".
  - d. Enclosed in protective housing that prevents physical and visual access to beam.
  - e. Disconnected when not operating.

*\*Note: Class II lasers are found in laser pointers and in aiming and range-finding devices. They pose a risk if the beam is directly viewed over a long period of time.*

6. Class III and IV lasers if for display only and not operated.

*\* Note: Class III lasers are found in higher powered laser pointers, printers and spectrometers. They are to be considered hazardous devices which can cause eye damage when the beam is directly viewed even for a short period of time. Class IV lasers are high powered lasers used in surgery, research, and industrial settings. They are extremely hazardous and can cause eye and skin damage from both direct and indirect exposure. The beam is also a fire hazard.*

7. Any apparatus producing temperatures that will cause physical burns if not adequately insulated.

### **Other Information and Requirements**

1. *Participants must be present at their projects for the set-up and judging. No other persons should be present representing the participant except for an interpreter if necessary.*
2. No changes, modifications, or additions to projects may be made after approval by Irrigation Expo Science Fair representatives.
3. Irrigation Expo Science Fair representatives reserve the right to remove any project for safety reasons or to protect the integrity of Irrigation Expo Science Fair.
4. A project data book and research paper are not required but are highly recommended.
5. Finalists using audio-visual or multi-media presentations (for example, 35mm slides; videotapes; images, graphics, animations, etc., displayed on computer monitors; or other non-print presentation methods) must be prepared to show the entire presentation to the Irrigation Expo Science Fair representatives.
7. Irrigation Expo Science Fair representatives are not responsible for damage to any project.
8. Any disks, CDs, printed materials, etc. designed to be distributed to judges or the public will be confiscated and will be discarded immediately.
9. Project sounds, lights, odors, or any other display items must not be distracting.

## **ALL PROJECTS**

### **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.

### **General**

- 1) All domestic and international students competing in a Irrigation Expo Science Fair must adhere to all of the rules as set forth in this document.
- 2) All projects must adhere to the Ethics Statement above.
- 3) Projects must adhere to local, state, country and U.S. Federal laws, regulations and permitting conditions.
- 4) Introduction or disposal of non-native species, pathogens, toxic chemicals or foreign substances into the environment is prohibited.
- 5) Science Fair exhibits must adhere to Irrigation Expo Science Fair display & safety requirements.
- 6) **It is the responsibility of the student and adult sponsor to check for any additional restrictions or requirements.**

### **The Adult Sponsor**

An Adult Sponsor may be a teacher, parent, university professor, or scientist in whose lab the student is working. This individual must have a solid background in science and should have close contact with the student during the course of the project. The Adult Sponsor is responsible for working with the student to evaluate any possible risks involved in order to ensure the health and safety of the student conducting the research.

# Irrigation Expo Science Fair Judge's Score Sheet

Entry Number: \_\_\_\_\_

Title of Project: \_\_\_\_\_

Contestant Division (circle one):    **Team**            **Individual**

Category: \_\_\_\_\_

## Part I: Written Material 50 points

		<u>Possible Points</u>
<b><u>RESEARCH PAPER</u></b>		
<b><i>A. Table of Contents and Introduction</i></b>		
1. Does the student(s) have a table of contents?	<b>1</b>	_____
2. Does the introduction clearly state the purpose of the project?	<b>3</b>	_____
3. Is the hypothesis clearly stated?	<b>2</b>	_____
4. Is the significance meaningful?	<b>2</b>	_____
<b><i>B. Materials and Methods</i></b>		
1. Are the materials listed?	<b>2</b>	_____
2. Is the experimental procedure defined?	<b>5</b>	_____
3. Are the projects procedures listed in an orderly manner?	<b>3</b>	_____
<b><i>C. Data Collection/Discussion</i></b>		
1. Did the students collect data relevant to the project?	<b>8</b>	_____
2. Did the student collect an adequate amount of data?	<b>6</b>	_____
3. Are the variables clearly recognized and defined?	<b>6</b>	_____
4. If controls were necessary, did the student recognize their need and were they used correctly?	<b>6</b>	_____
<b><i>D. Conclusion</i></b>		
1. Does the conclusion pertain to the hypothesis?	<b>5</b>	_____
2. Is there adequate data to support the conclusion?	<b>5</b>	_____
<b><i>E. Acknowledgements and References</i></b>		
1. Did the student identify sources of research?	<b>4</b>	_____
<b>PART I TOTAL</b>	<b>50</b>	_____

# Irrigation Expo Science Fair

## Judge's Score Sheet-Page 2

Entry Number: \_\_\_\_\_

Title of Project: \_\_\_\_\_

### Part II: Project Presentation 50 points

		<u>Possible Points</u>
<b><u>PROJECT BOOK</u></b>		
1. Is there a measurable amount of data collection, recordings, photos, graphs, etc.?	<b>8</b>	_____
<b><u>PROJECT DISPLAY</u></b>		
1. Is the presentation original and creative?	<b>5</b>	_____
2. How well does it explain the project?	<b>4</b>	_____
3. Are graphs, charts, tables, pictures clearly labeled?	<b>3</b>	_____
4. Is the display easy to read and appealing to the eye?	<b>3</b>	_____
<b><u>ORAL INTERVIEW</u></b>		
1. Did the student(s) answer questions to the best of their ability?	<b>5</b>	_____
2. Did the student(s) speak in a loud, clear voice?	<b>4</b>	_____
3. Did the student(s) use appropriate posture, body language and eye contact?	<b>4</b>	_____
4. Did the student(s) state the title, purpose and explain the reason for their topic selection?	<b>4</b>	_____
5. Was the student(s) well-prepared and knowledgeable about the project?	<b>10</b>	_____

<b>PART II TOTAL</b>	<b>50</b>	_____
<b>PART I TOTAL</b>	<b>50</b>	_____
<b>GRAND TOTAL</b>	<b>100</b>	_____

**Judges Comments:**

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**Judges Name (Printed)** \_\_\_\_\_

**Judges Signature** \_\_\_\_\_





Texas Irrigation Expo | 2010

**PARTICIPANT WAIVER, INDEMNIFICATION, AND MEDICAL TREATMENT AUTHORIZATION FORM**

1. EXCULPATORY CLAUSE. In consideration for receiving permission to participate in any and all activities of the Irrigation Expo Science Fair 2010 (herein referred to as "activity"), which is sponsored by Harlingen Irrigation District, Cameron County (herein referred to as "sponsor"), I hereby release, waive, discharge, covenant not to sue, and agree to hold harmless for any and all purposes sponsor, The Harlingen Irrigation District, and their members, officers, servants, agents, volunteers, or employees (herein referred to as RELEASEES or INDEMNITEES) from any and all liabilities, claims, demands, injuries (including death), or damages, including court costs and attorney's fees and expenses, that may be sustained by me while participating in such activity, while traveling to and from the activity, or while on the premises owned or leased by RELEASEES, **including injuries sustained as a result of the sole, joint, or concurrent negligence, negligence per se, statutory fault, or strict liability of RELEASEES.** I understand this waiver does not apply to injuries caused by intentional or grossly negligent conduct.

2. INDEMNITY CLAUSE. I am fully aware that there are inherent risks to myself and others involved with this activity, including but not limited to the use of machinery, exposure to non-hazardous chemicals, and high water pressure, and I choose to voluntarily participate in said activity with full knowledge that the activity may be hazardous to me and my property, and to the person and property of others. I acknowledge there may be physically strenuous activities. I know of no medical reason why I should not participate. **I agree to indemnify and hold harmless INDEMNITEES** from any and all liabilities, claims, demands, injuries (including death), or damages, including court costs and attorney's fees and expenses, which may occur to myself, other participants, and third-persons as a result of my participation in said activity, **including injuries sustained as a result of the sole, joint, or concurrent negligence, negligence per se, statutory fault, or strict liability of INDEMNITEES.**

3. NO INSURANCE. I understand that RELEASEES do not maintain any insurance policy covering any circumstance arising from my participation in this activity or any event related to that participation. As such, I am aware that I should review my personal insurance coverage. Sponsor does not carry general liability insurance to cover claims arising from this activity so it seeks a waiver of claims as additional consideration for the right to participate so sponsor, a governmental unit of the State of Texas, can (a) provide the activity at the lowest possible cost to participants; and (b) provide access to a greater number of participants by expending limited resources on program materials rather than on liability insurance.

4. BINDS HEIRS. It is my express intent that this agreement shall bind the members of my family and spouse, if I am alive, and my heirs, assigns and personal representatives, if I am deceased, and shall be governed by the laws of the State of Texas.

5. MEDICAL AUTHORIZATION, INDEMNITY FOR MEDICAL EXPENSES, and WAIVER. I understand RELEASEES cannot be expected to control all of the risks articulated in this form and RELEASEES may need to respond to accidents and potential emergency situations. Therefore, I hereby give my consent for any medical treatment that may be required, as determined by a medical professional at the medical facility, during my participation in this activity with the understanding that the cost of any such treatment will be my responsibility. I agree to indemnify and hold harmless INDEMNITEES for any costs incurred to treat me, even if an INDEMNITEE has signed hospital documentation promising to pay for the treatment due to my inability to sign the documentation. I further agree to release, waive, discharge, covenant not to sue, and agree to hold harmless for any and all purposes, RELEASEES from any and all liabilities, claims, demands, injuries (including death), or damages, including court costs and attorney's fees and

expenses, that may be sustained by me while receiving medical care or in deciding to seek medical care, including while traveling to and from a medical care facility, **including injuries sustained as a result of the sole, joint, or concurrent negligence, negligence per se, statutory fault, or strict liability of RELEASEES.** I understand this waiver does not apply to injuries caused by intentional or grossly negligent conduct.

6. VOLUNTARY SIGNATURE. In signing this agreement I acknowledge and represent that I have read it, understand it, and sign it voluntarily as my own free act and deed; sponsor has not made and I have not relied on any oral representations, statements, or inducements apart from the terms contained in this agreement. I execute this document for full, adequate and complete consideration fully intending to be bound by the same, now and in the future. **I understand I can choose not to sign this document and free myself from its terms and the associated risks of the activity by simply not participating in the activity and choosing some other activity available to me that has a lower level of risk to me. I further understand this is a voluntary, extracurricular activity; therefore it is not required for me to obtain middle school or high school credits and not participating in this activity will in no way hinder my ability to graduate from the educational institution.**

I understand participation in this activity is not mandatory and I will not be penalized for failing to participate. I desire to voluntarily engage in this activity.

**SIGNING THIS DOCUMENT INVOLVES THE WAIVER OF VALUABLE LEGAL RIGHTS.  
CONSULT YOUR ATTORNEY BEFORE SIGNING THIS DOCUMENT.**

**SIGNED** this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_.

**Participant Signature:** \_\_\_\_\_

**Printed Name:** \_\_\_\_\_

**Participant's Date of Birth:** \_\_\_\_\_

**Parent or Legal Guardian Signature:** \_\_\_\_\_

(If Participant is under 18 years old)

**Parent or Legal Guardian Printed Name:** \_\_\_\_\_

(If Participant is under 18 years old)

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**HARLINGEN IRRIGATION DISTRICT, CAMERON COUNTY**

**TEXAS IRRIGATION EXPO PHOTO RELEASE FORM**

I hereby grant permission to the Harlingen Irrigation District of Cameron County, 301 E. Pierce, Harlingen, and Irrigation Expo Science Fair, its legal representatives, assigns and those acting under its authority, to copyright, publish and use in all forms and media and all manners for advertising, trade, promotion, exhibition or any other lawful purpose whatsoever. This includes, but is not limited to still, single, multiple or moving photographic portraits or pictures of me in which I may be included in whole or in part, or composite or changed in character, or form in conjunction with my own or a fictitious name, or reproductions thereof in color or otherwise or other derivative works made through any medium. I hereby waive the right to inspect the finished product that may be used in connection therewith or the use to which it may be applied. I do hereby warrant that I am of full age and have every right to contract in my own name in the above regard.\* Further, I have read the above authorization and release, prior to its execution, and I am fully familiar with the contents thereof.

\_\_\_\_\_ (Print Name)

\_\_\_\_\_ (Signature)

\_\_\_\_\_ (Date)

.....

\* Consent (If applicable)

I am the parent or legal guardian of the minor named above, and I have the legal authority to execute the above release.

I approve the foregoing and waive any rights in the premises.

\_\_\_\_\_ (Print - Parent/Legal Guardian)

\_\_\_\_\_ (Signature – Parent/Legal Guardian)

\_\_\_\_\_ (Date)

**THIS FORM MUST RETURNED BY THURSDAY, SEPTEMBER 30, 2010.**