



## Alfaisal Science & Technology Day

Thursday, April 2, 2020

Alfaisal Science & Technology Day encourages Grade 9<sup>th</sup>-12<sup>th</sup> students to undertake scientific investigations and innovative technologies. With support from teachers, parents, and mentors the students conduct investigations and develop innovative solutions to problems, then prepare a display and a presentation of their work.

The goal is to encourage, recognize, and celebrate participation and excellence in project-based science & technology in the Kingdom of Saudi Arabia (KSA). Students will present their projects to the general public, and will be evaluated by university and corporate evaluators to select the winners for the grand prizes.

### Objectives of the Competition

- ✚ Encourage students to think critically, work together and get excited about science
- ✚ Continue to popularize Science and Technology in the region

### Event Details

**Event:** Thursday, April 2, 2020

**Time:** 3:00 pm

**Venue:** Alfaisal University campus, College of Science Building, Ground floor

### Registration Deadlines:

- ✚ Open Online Registration: Midnight, Sunday, January 26<sup>th</sup>, 2020
  - ✚ Closed Online Registration: Midnight, Sunday, March 15<sup>th</sup>, 2020
- ❖ All participants and their parent/guardian must complete and sign the *mandatory* Consent Form (form attached below).

## Project Type

### Experiment

A good experiment will recognize and control all significant variables and demonstrate excellent collection, analysis, and presentation of data. Significant positive findings are not essential to achieve a successful experiment.

### Innovation

Innovation involves the development and evaluation of new devices, techniques or approaches in such technology.

### Study

A study involves the collection and analysis of data from other sources. Its intent is to reveal evidence of scientific interest. This could include cause and effect relationships, in-depth studies, or theoretical investigations of scientific data.

## Sci-Tech Divisions

- **Biotechnology**
  - Applying knowledge of biological systems and current technology to solve problems, create products, or provide services.
  
- **Food and Environmental Sciences & Sustainability**
  - Issues related to food safety, environment and sustainability.
  
- **Life Sciences**
  - Experiments, studies, or innovations concerned with how living things function.
  
- **Physical Sciences & Nanotechnology**
  - Experiments, studies, or innovations concerned with the properties of matter and energy, the principles of their interactions and their applications.

## Rules and Regulations

### Who Can Participate

Participants must live or attend a school in KSA. Grade 9<sup>th</sup>-12<sup>th</sup> students are encouraged to participate.

**Maximum of three students per project** and all students must be present.

If either participant is not present during the fair, the project will not be eligible for any awards.

Students may not enter identical projects in multiple years.

Students may not enter the same project presented in last year's competition.

### School Quotas

Schools covering Grades 9<sup>th</sup> to 12<sup>th</sup> will be allowed a total of 10 projects across all grades.

## **Presentations on Science Day**

Participants are allowed to properly acknowledge their mentors or labs where work was carried out.

All exhibits including all accessories, must be confined to a table or floor space designated for the exhibit. It should not exceed 0.7 meters front to back; 1.2 meters side to side; and 2.5 meters maximum height from the floor.

All projects must be original. No trademarks permitted on any of the projects (toys, etc.)

No dangers chemicals, organic materials or living organisms may be displayed at the day of the fair. We encourage students to take photographs if any of these were used in the project.

Exhibits must be sturdy with moving parts firmly attached and approved for safety. Electricity will be supplied on request, but no gas or water outlets will be provided. Switches and cords must be of the approved variety and circuits should be protected by fuses. Cell or battery-fed circuits should be both safe in design and operation.

All sharp edges or corners on prisms, mirrors, enclosures, and glass and metal plates must be protected.

Aisles and exits should not be obstructed.




Moving exhibits (e.g., radio-controlled vehicles, robots) should be restricted to the regulation display space. The committee will endeavor to provide an area to safely demonstrate to judges projects that require more space than the regulated exhibit display space.

## **Awards**

1<sup>st</sup> prize 2,500 SAR

2<sup>nd</sup> prize 1,500 SAR

3<sup>rd</sup> Prize 1,000 SAR

-  Participants admitted to the College of Science at Alfaisal University will receive up to 50% Scholarship.
-  All participating students will receive a Certificate of Participation.
-  Winning projects will be displayed on Alfaisal University campus.

## **Our Sponsors**

Alfaisal Science & Technology Day greatly appreciates the funding provided by our sponsors. Through their generosity, we are able to provide a science fair experience for all students who are interested in taking part.

## Preparation for the Science & Technology Day

Students will need parents and/or teachers support to provide resources to carry out and present a successful science fair project.

1. Students are encouraged to begin the Science Day process well in advance of deadlines - each step of the process will probably take more time than expected.
2. Parents and teachers should ensure that projects are conducted safely and according to the Safety guidelines.
3. Parents and teachers may help the students to gather material, give advice, and provide moral support
4. Students and parents must fill and sign the mandatory consent form. Your child will upload this signed form on the registration night.

## How Students will be Judged

See the *Evaluation Form* criteria attached below on how students will be judged for the competition.

## Resources

The following is a brief list of resources that may help you as you guide your child through this journey:

- **Science Buddies Parents' Guide:** Science Buddies is a non-profit organization focused on providing free science fair ideas, answers, and tools for students in grades K-12. Many other great resources can be found under the Parent link on this site.  
(<http://www.sciencebuddies.org/blog/2015/08/a-positive-science-fair-project-experience.php>)
- **Youth Science Foundation: Smarter Science** is part of Youth Science Canada's program for engaging youth in science and providing a curricular connection to project-based science and science fairs. This site provides many excellent links for all ages that can help your child plan, carry out and present a successful Science Fair project.  
(<https://smarterscience.youthscience.ca/science-fair-resources>)
- **Science Fair Central** from Discovery Education offers free resources ranging from getting started to presenting final projects. There is also a very good **guide for parents**.  
(<http://school.discoveryeducation.com/sciencefaircentral/?pID=fair>)  
(<http://school.discoveryeducation.com/sciencefaircentral/Parent-Resources.html>)
- **Anatomy of a display board:**  
(<http://www.sciencebuddies.org/blog/2015/03/putting-together-a-project-display-board.php>)

# Science & Technology Day / April 2020

## Evaluation Form (Rev.1)

Project Number \_\_\_\_\_

Name of Judge: \_\_\_\_\_

### CATEGORIES

A. (Please check (✓) one box):

Biotechnology

Food, Environmental Science & Sustainability

Life Sciences

Physical Sciences & Nanotechnology

Poster Title:

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Please ask presenter to give an overall summary (five minutes) of their project.

### Communication, Information Technology and Numerical Skills:

**Organization & Delivery** \_\_\_\_\_/10 points

- Outline: Was there logical flow of thought?
- Summary: Did it summarize the main points?
- Tone of voice
- Visual contact with the audience

**Quality of Presentation** \_\_\_\_\_/10 points

- Level of proficiency in use of information technology (quality & clarity of figures, tables, models)
- Level of proficiency of numerical skills (computation, if applicable)
- Is the font size reasonable to read?
- Is the information too crowded?

### Interpersonal Skills, Responsibility and Professional Development

**Teamwork, Leadership, Ethics & Lifelong Learning** \_\_\_\_\_/10 points

- Did the investigator recognize the economic, ethical and environmental implication of such technology?
- Ability to work effectively with others as a team member (if applicable)
- Impact on their capacity for personal career progression

### Originality & Cognitive Skills:

**Critical Thinking and Problem Solving** \_\_\_\_\_/10 points

- Is this the students' own work/idea?
- Ability to reason logically and creatively and apply critical thinking and scientific methods to explore facts, concepts, theories and problems to make informed and responsible decisions and/or to pursue practical solutions for real life problems.

**Ability to Answer Questions** \_\_\_\_\_/10 points

**TOTAL** \_\_\_\_\_ /50 points



## Consent Form for Alfaisal Science & Technology Day

Participant's Name & Grade: \_\_\_\_\_

**Please Print**

Participant's School: \_\_\_\_\_

Participant's Project Title: \_\_\_\_\_

Please read the following terms and conditions carefully. By entering the Alfaisal Science & Technology Day event, we agree to allow the project title, the abstract, a wide angle photograph of the project, and the student's name and picture to be published by the media (print and broadcast) and employees, agents, or administrators of the Alfaisal Science Day event. This information may also be posted on Alfaisal University website.

I, \_\_\_\_\_ hereby give permission for my (Name of parent/guardian, or student if 19 or older) son/daughter to participate in the Alfaisal Science & Technology Day Event. I understand that while supervision is provided at the event, my son/daughter's behavior, project, transportation to/from the event, and cost of meals is my responsibility.

We agree that all judging evaluations and decisions reached at the Alfaisal Science & Technology Day event is final and binding. By signing this form, each participant acknowledges he/she has read, understood and followed all safety and ethical regulations and guidelines provided, including those for animal and human studies. Alfaisal University and its affiliates are not responsible for any damage, lost items, broken/missing parts, etc. to his/her project presented for the event.

\_\_\_\_\_  
Signature of Student(s), Date

\_\_\_\_\_  
Signature of Parent(s), Date

**No project check-in or set up will be allowed without the submission of this form properly completed.**

**This form must be signed and uploaded online to the Alfaisal University link by:**

**Sunday, March 15<sup>th</sup> by 11:59 pm**