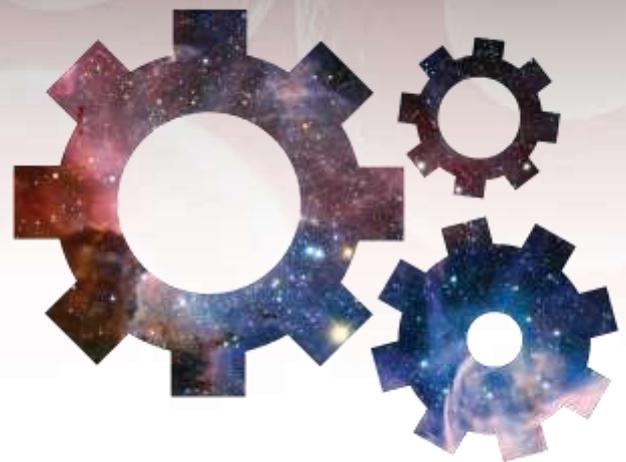


# *Exhibitors Handbook*

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## SciFI-2016

### Science Fair International

Preparing Children for Future Science

On

**Fri, Feb. 19th (Public)**

At

**Columbia International  
School**

**Tokorozawa, Saitama**



## Where to Start

The best Science Fair entries are those which investigate something. The "something can be quite simple- in fact it is better if it is simple. Science is about investigating things. It is not about presenting "all about...." type of material.

## Understanding Investigation

Particular questions about "things" around you such as: which sort of things do mice/people/dogs etc. learn quicker? Do fruits or vegetables have electrical properties or produce a charge? What materials float longer? Or better?

Comparisons of different sorts/makes of everyday items such as : Cleaners, bicycle tires, heat retention of sleeping bags/ sweatshirts, bicycle reflectors etc.

Collecting information on "things" around you: eg. Changes in a pond over a period of time, factors affecting the life cycle or growth of a plant/animal species etc. Analyzing some everyday items such as: which plant species contain natural insect repellents, effective concentrations of detergents/antiseptics/flavoring, lead in the soil etc.

## Your Investigation

- 1- Choose something you are interested in, which you have wondered about, which perhaps you feel is particularly relevant to life as you see it and which you can investigate in the time you have with the materials, equipment and skills you have available. Don't choose an experiment you did as part of your school work unless you intend to take the experiment much further, produce a hypothesis, supporting data and conclusions.
- 2- Select some questions about which need answers, such as: Why?, What if...?, Where..? How, etc.
- 3- Find out how much is already known about it from your local or school library and or your science teacher and perhaps scientists in your area. Keep record of the books and the people you consult.
- 4- Decide what you need to measure or get information about (from observations, experiments) to be able to answer the questions you have.
- 5- Record all measurements and all details of your experiments or observations.
- 6- When you have collected your data you will need to organize then into logical sequence and present it in a form which is easy to understand by someone who knows nothing about it.

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7- At some stage you have to sum up your investigations and come to a conclusion about it. This is when you decide whether the idea you were investigating is supported or not by your data. You may decide you have insufficient data, or that it doesn't support the idea you were investigating- but don't give up! Science is about investigating and science investigation is never finished. So present the information you did gain, and more important, how you gained it, what still needs to be investigated, what you would now do differently, and so on.

## What to Record

- 1- The purpose of the investigation
- 2- The different treatments or conditions you had
- 3- any things that you took for granted (assumptions) affecting your results.
- 4- The data you collected

## Presentation

This is the next major step. Your entry can only be judged on the information you communicate- so communication is important. Your display has three main parts.

### 1- An approximately designed display stand

You are limited to space of 120cm long by 75cm deep and 100cm in height approximately. This display stand shall be free standing and robust. This style of display stand has been found to be suitable for most entries.

### 2- The material on display

There is only enough room to show the essentials of your project. You need to show briefly;

- ◆ What you investigated (hypothesis)
- ◆ How you investigated it (display the equipment/photos/drawings)
- ◆ A summary of your results (best in chart and table form)
- ◆ Your Conclusions

You must keep it simple. Do not show too much information- leave this for your report.

You must show your project: your presentation should:

- ◆ Attract attention (use color/light/movement)
- ◆ Be interesting to look at (use photographs/drawings/models)
- ◆ Be clear and easy to follow (use large print, good layout...)
- ◆ Be accurate (check spelling, labeling on graphs, etc...)

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## 3- Your Report

You will have a lot of information about your investigation, but as only the essentials of it can be presented, the details need to be put in a separate report. The judges will wish to see the details and discuss them with you. You can use the report to both present the details and to refer to as the judges question you.

Your report should have these sections:

- ◆ A description of what you investigated and why you chose it.
- ◆ A description of materials and methods you used. Illustrate this where possible with diagrams/photos/sketches.
- ◆ A discussion of the methods, including the variables that you had to control, any sources of error and things you knew you had to control, any sources of error and things you knew you had to take for granted.
- ◆ Your data, both in raw form and in the form you selected for presentation.
- ◆ Your conclusions or your reasons for being unable to reach a conclusion. You should also briefly discuss why you think your conclusions are the correct ones to come from the data you gathered.
- ◆ A bibliography, listing the books you referred to.
- ◆ Acknowledgements: a list of the people who helped you and the nature and extent of their assistance.

## How much help you may have?

Your exhibit and investigation must be your own (or your group's) efforts. This does not prevent you seeking advice and assistance from others. Seek advice particularly in these areas.

- ◆ Experimental procedures. You will save yourself lot of time and effort by using well proven experimental methods – so ask for advice here.
- ◆ Basic laws of science: ask someone who is knowledgeable in science to check you are not trying to do things which are not possible, given what we already know about the behavior of materials, light, etc.
- ◆ Specialized equipment: you may borrow specialized equipment and be shown how to use it correctly.
- ◆ Presentation of your exhibit: seek help in taking photos, in how to do good lettering, in how to lay it our well etc.

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## What the Judges are looking for?

You have entered a Science Fair, so the science and the communication aspects are very important.

The judges will use Guide Cards to give you feedback on your projects strengths and areas that could be improved. Important aspects in each area are listed on the cards.

Points the judges will be looking for

<b>Creative Ability</b>	The Project should show originality in the investigation of some problem.
<b>Scientific Thought</b>	Accuracy of theory and observation and the use of controlled experiments.
<b>Thoroughness</b>	The exhibit should tell a full story of the project, correctly emphasizing the important points.
<b>Technical Skills</b>	Soundly constructed exhibits showing good craftsmanship.
<b>Clarity</b>	The exhibit should be clearly understood by the layman.
<b>Presentation</b>	The exhibit should attract and retain the attention of the viewer.
<b>Honesty</b>	If help is received from persons other than exhibitor(s), this <b>MUST</b> be acknowledged.

## Safety Rules

The following safety rules for construction of projects are necessary to prevent electrical fires and/or injury to visitors.

All projects will be carefully inspected by the SciFI committee before they are accepted for display in the hall. Those that do not comply with the following rules will be disqualified.

- ◆ Construction must be durable, with movable parts firmly attached and safe
- ◆ DO NOT plan any experiments that involves any live or dead animals
- ◆ Dangerous chemicals, and explosives **MUST** not be exhibited
- ◆ Flammables or Inflammables **MUST** not be used in your exhibits
- ◆ Exhibitors **MUST** have plastic trays and clean up materials for exhibits which contain liquids.

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## Display Stand

The best Science Fair entries are those which investigate something. The "something can be quite simple- in fact it is better if it is simple. Science is about investigating things. It is not about presenting "all about...." type of material.



**Available space: 120cm (width) x 75cm (depth) x 100cm (height)**

## A Final Checklist

- ◆ Are you familiar with all aspects of your investigation? The judges may question you closely about it.
  - ◆ Is your project well presented? Is it interesting to look at? Will it attract attention? Does it clearly and accurately communicate the essentials of your research, its results and conclusions?
  - ◆ What are you going to say to the judges and any visitor to the Fair about your project? Prepare a 1-3 minute verbal presentation about your exhibit.
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## Annexure

Venue: 359-0027, Saitama, Tokorozawa, Matsugo 153



The nearest station is Higashi-Tokorozawa on the JR Musashino-line  
44 minutes from Tokyo station,  
37 minutes from Shibuya station,  
64 minutes from Yokohama station