ISLAMIC MISSION SCHOOL

Affiliated to CISCE, New Delhi

PRESENTS

SCIBERATION 2023
(2ND EDITION)

5th-6th NOVEMBER 2023

Of the children, By the children, For the children

State-Level Inter-School Science Fair

Junior Group (V to VIII)
Senior Group (IX & X)

- QUIZZES
- WORKSHOPS
- ACTIVITY CORNER
- RESEARCH PROJECTS

Last Date of Registration 30th Sep. 2023

1st Prize-10000/-
2nd Prize-6000/-
3rd Prize-4000/-

WINNER'S TROPHY
CERTIFICATE FOR PARTICIPANTS
&
PROJECT SUPERVISORS

For Registration Scan Here

Islamic Mission School
Fort Green City, Near AMU Fort, Aligarh
Contact for enquiry: **9289250429, 7013381841**
www.sciberation.org

Guidelines for students

Science Fair is not Science Exhibition!

Science fair expects participants to get involved in research, by identifying a problem or asking question and exploring it by applying various research methodologies. It is not a normal science model making exercise as in a science exhibition. You need to understand various variables involved (independent variable, dependent variable, control etc.) and the Scientific Method of discovery, which involve the following steps:

1- Ask a question based on your observation
2- Give a hypothesis i.e., give your explanation (or an educated guess) or reason regarding what you are observing.
3- Try proving your hypothesis by conducting experiments, interviews and surveys
4- If your hypothesis is proven correct with the help of experiments in step3, your initial guess (step 2) is accepted by the scientific community. But if the hypothesis is proven incorrect by the experiments conducted in step 3, then you need to go back to step 2, and modify your hypothesis and repeat the step 3 and 4.

See the following reference to get an idea of how students have carried out research in past and also note the format of the report:

https://www.education.com/science-fair/article/battery-life-science-experiment/

Other examples can be seen on these websites:

www.sciencefair-projects.org

www.sciencebuddies.org

https://www.juliantrubin.com/

www.googlesciencefair.com

www.irisnationalsciencefair.org.

Please note that apart from such research-based projects, we are also open for novel and innovative equipment designs under the category of Medical Electronics, innovative application development related to AI, and other related areas.

Please send a WhatsApp message to 9289250429 to get guidance from our experts' team, who will clarify your doubts.

How do I get started?

The following guidelines will help you in getting started with the science fair projects.

1- Choose a topic or a problem matching the above-mentioned themes that interests you. Discuss with your teachers and any expert in field you know. Try to find problems which are faced by masses and have serious implications.

2- State your purpose as a question. What problems you want to solve and why? What do you want to discover or invent and why?

3- Do some research related to the problem. Try to find existing solutions and research carried out in the area you are willing to work.

4- Form a hypothesis. A hypothesis is an educated guess. Scientists give hypothesis and then try to prove it with the support of experiments and surveys.

5- Plan your project. Think how you will prove your hypothesis. What experiments will you conduct? Will you conduct some interviews?

6- Collect all your required materials.

7- Conduct your experiments**.** Identify the important Variables:

a- Independent variable (intentionally changed, only one in an experiment)

b- Dependent variable (responding variable, we observe as data, can be one or more)

c- Control: unchanged throughout the entire experiment (one or more, factors kept constant throughout the entire experiment)

For example, in a study of how different sources of water for a plant, affect its growth, the water from different sources will be independent variable, the dependent variable will be height, and everything else need to be kept constant.

Watch this video to have a better grasp of the concept:

https://www.youtube.com/watch?v=tK2mBsSb3uw

Search on Youtube:

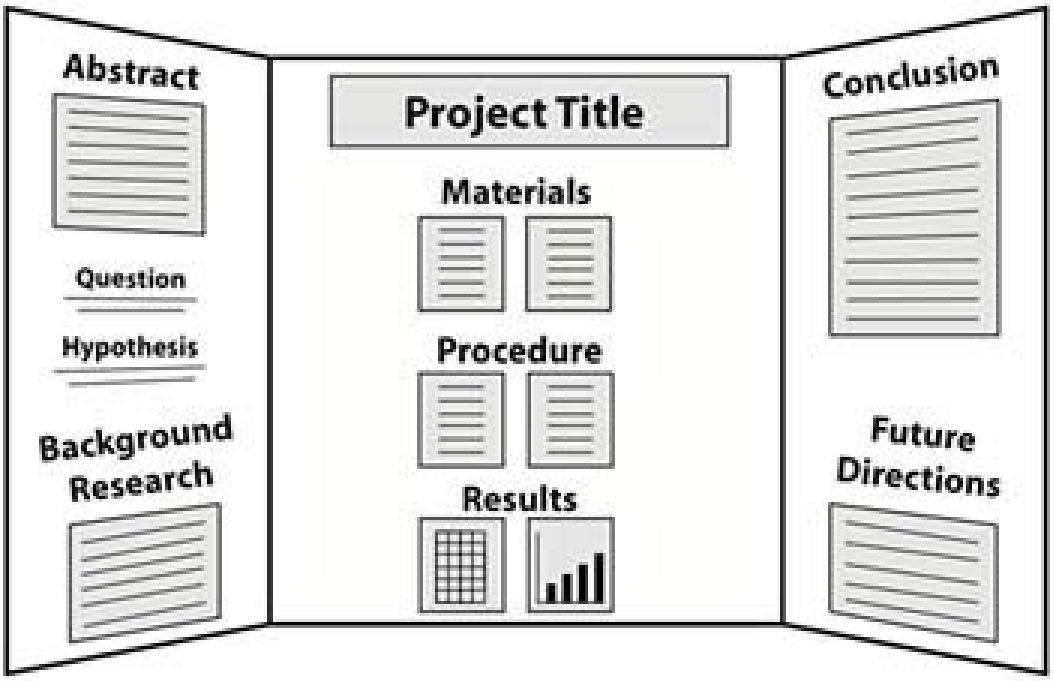
Experiments Explained: Clear and Simple! Learn the Basics Brainstem

8- Record your data. Regularly take pictures and short videos of your experimental setup and any interesting observation made.

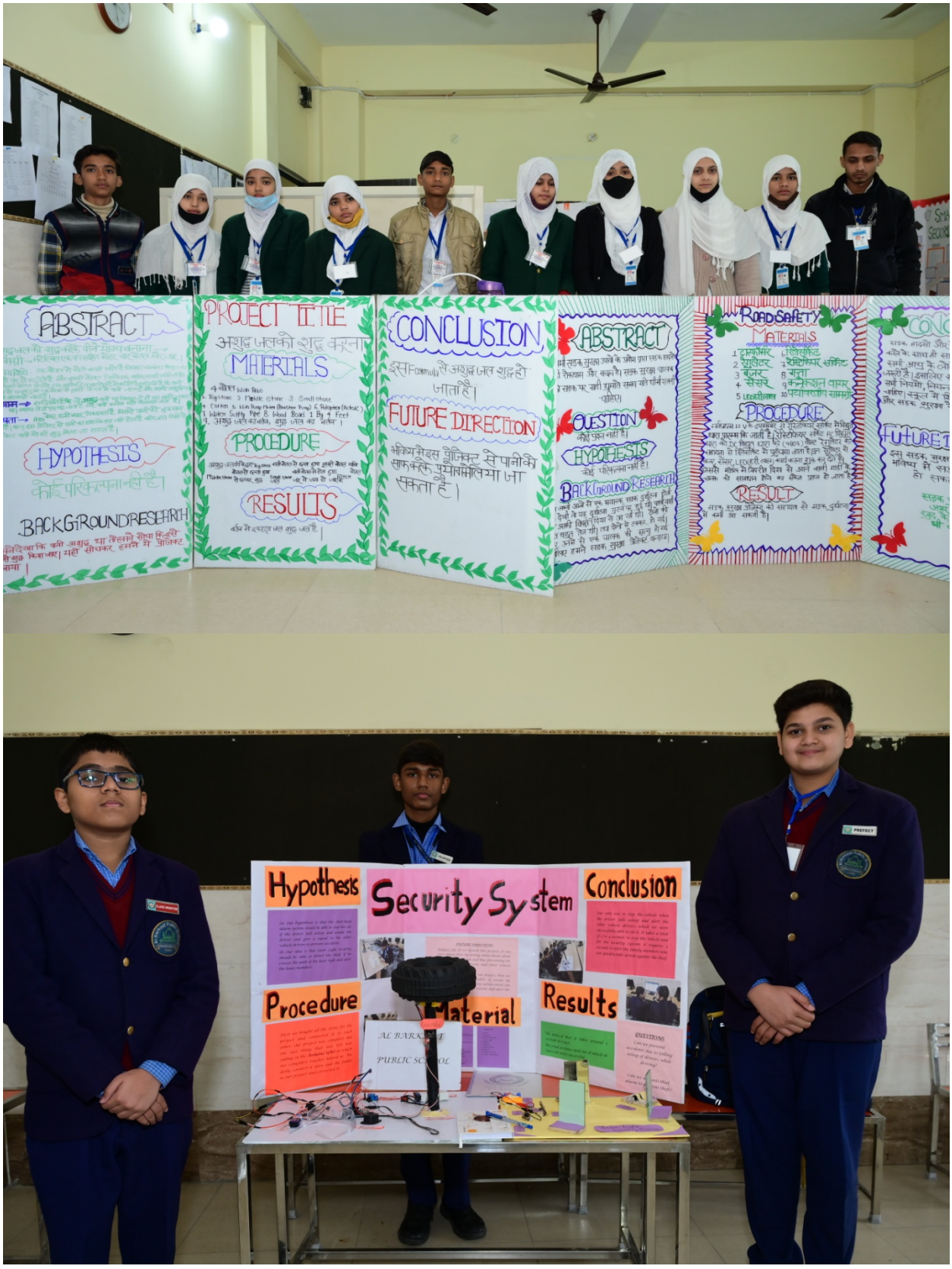
9- Draw conclusions.

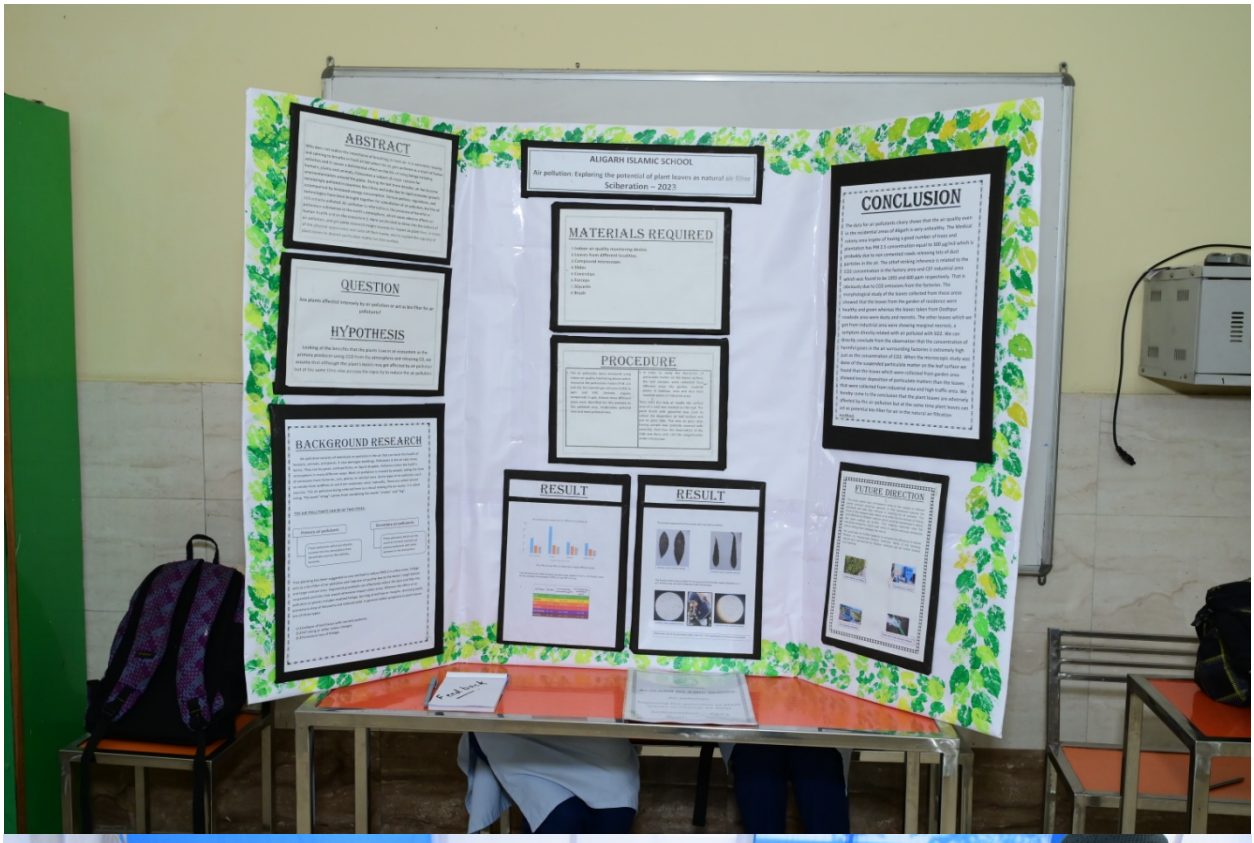
10- Think of meaningful titles, charts, graphs, tables, drawings and diagrams. Make them bold, neat, and colorful wherever required.

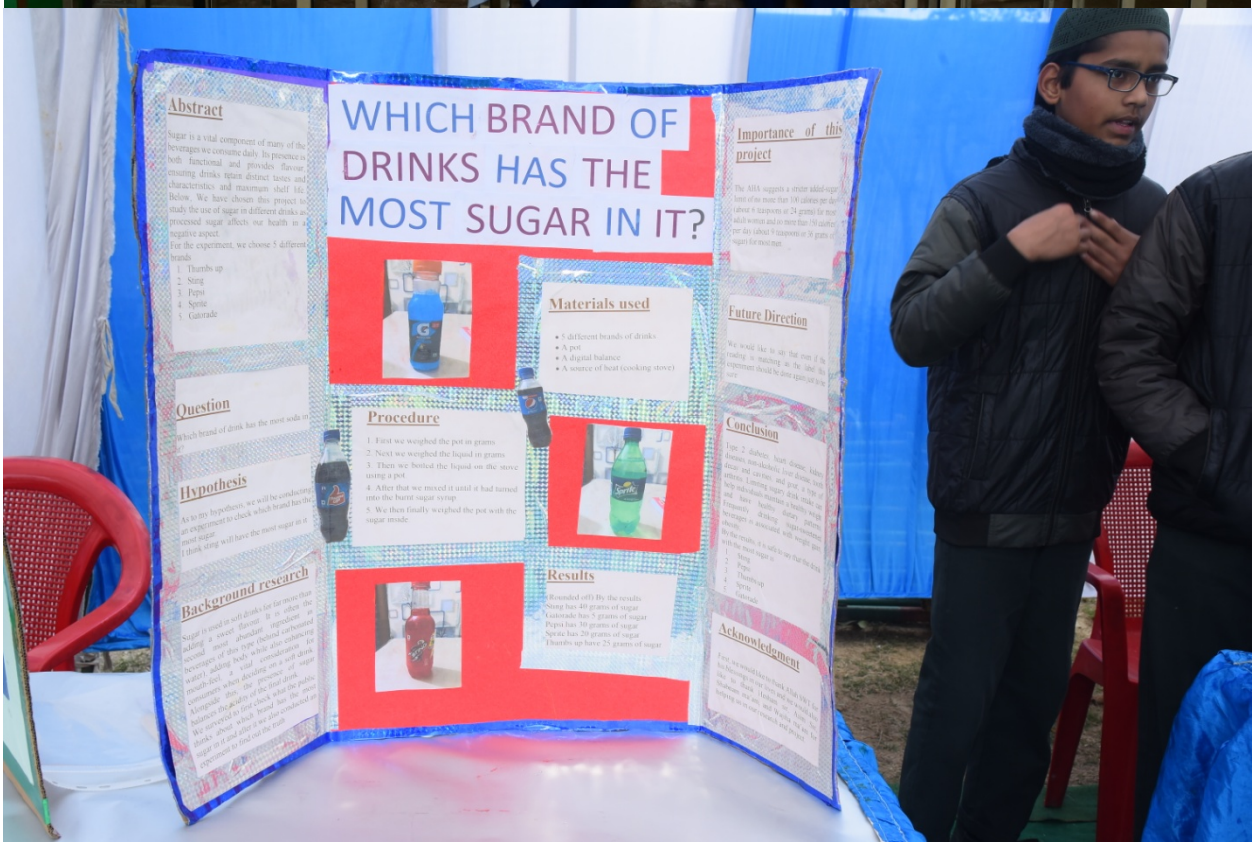
11- Construct your science fair display as shown below.

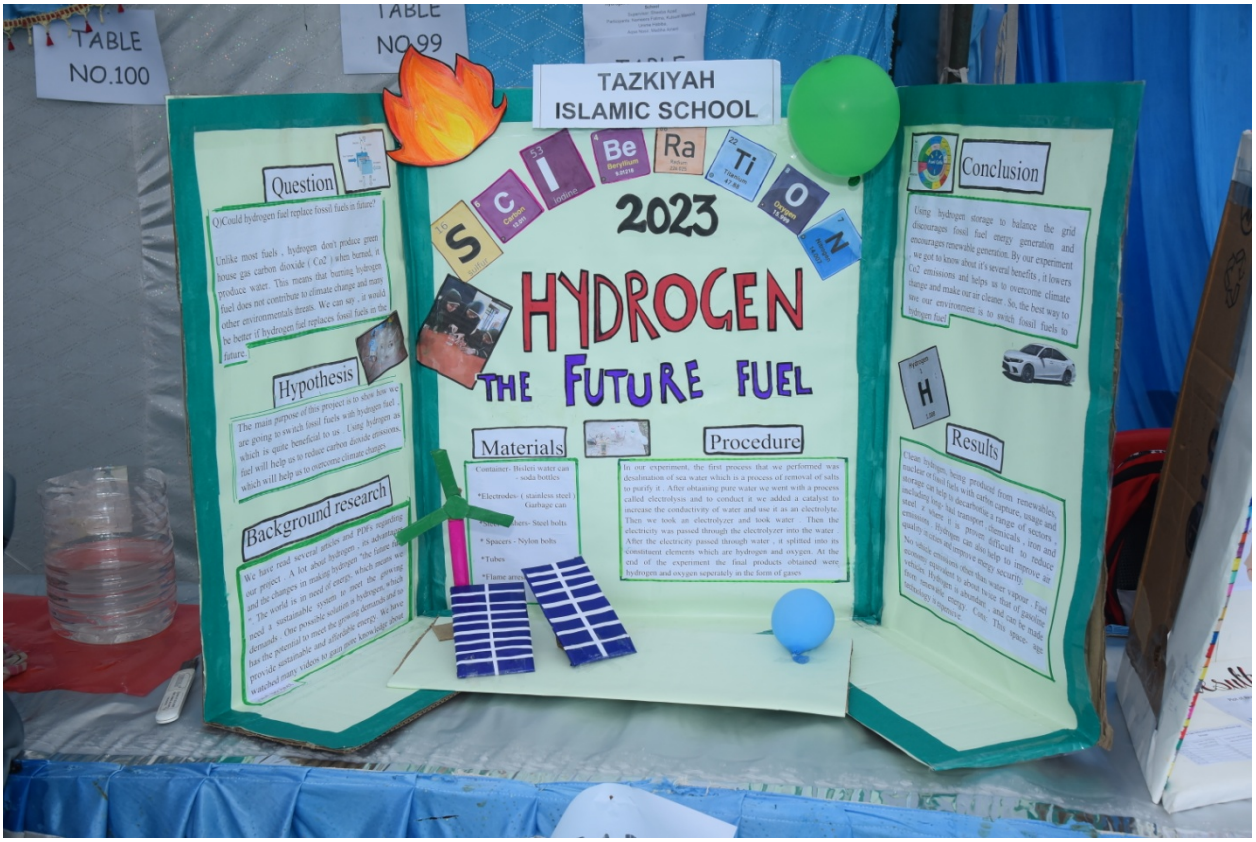


Height= 1m, Width =1.5 m









12- Prepare and practice your presentation in presence of friends and your teachers who will critically analyze skills and give feedback.

13- Plan a time-line so you don't leave everything until the last minute. If you need help, tell your supervisor, the earlier the better!

Contact us for any further query via WhatsApp 9289250429

Science fair written report format

Participants are required to submit a project report which should include:

- ✓ Title page: Mention the title of the project, your team members' name, your grade, and your school name.
- ✓ Acknowledgment: In this section you thank people who have helped you throughout the project, including those you interviewed, teachers, scientists, and other experts you interacted with.
- ✓ Table of Content: Readers will get help from this table as this will direct them to the desired section. You have seen this in the beginning of your text books.
- ✓ Statement of Purpose: Mention what problem you are solving or what are you trying to find or discover.
- ✓ Hypothesis: A hypothesis is an educated guess about what you think will occur as a result from completing your experiment.
- ✓ Research: In this section mention all the articles, papers etc. you have read, videos you have watched and what the authors have said about your research topics. Do not copy their conclusions directly; instead write in your own words (this important!). Copy pasting directly will lead to plagiarisms, and will disqualify you.
- ✓ Materials: This is a list of all the materials and supplies that you have used in the project. Mention the quantities and make/brand of each item used, so that other

researchers can replicate the experiment designed by you.

- ✓ Procedure: Explain how you conducted the experiment. This will help others to replicate the experiments and verify your findings.
- ✓ Observations and Results: Here you will explain your findings and whether your hypothesis passed or failed. Use data charts, figures, and pictures to illustrate your point.
- ✓ Conclusion: This is a brief paragraph explaining the reader your results and whyit turned out the way it did. Explain the importance of the research you have conducted. In view of the observed data, you should tell whether the hypothesis was proven or disprove and the implications of the same. Highlight the things that you did not know before you completed the project.
- ✓ Reference Page: The bibliography should list all the reference material used during the project, such as research papers, magazine articles, website and book chapters etc.

Science Fair Safety Rules

Keep in mind the following rules regarding safety:

1. Safety is most important. During experiments take help of adults.
2. Do not eat or drink during an experiment and always keep your work area clean.
3. Wear protective goggles and other PPE when doing any experiment.
4. Never touch, taste, or inhale any chemicals used in the experiment. Before using a chemical read about safety measures for handling the same.
5. Do not perform an experiment that will harm a person or an animal.
6. All experiments should be conducted under the supervision of an adult.
7. Always wash your hands after doing the experiment, especially if you have been handling chemicals.
8. Dispose waste properly in separate dustbins.
9. Projects involving firearms, crackers or explosives are NOT permitted.
10. Be mindful of Internet safety. Do not interact with anybody without the permission of your supervisor or an adult at home.
11. Sharp tools and use of electrical equipment must be used under the supervision of your supervisor or any other adult.