SCIENCE TECHNOLOGY AND INNOVATION

Under the aegis of the Board of Directors,
Indian Schools in Oman

STAI 2022

Organised by

INDIAN SCHOOL DARSAIT

27th August and 3rd September 2022

"INGENIOUS CREATIVE MINDS"

FOREWORD

Indian School Darsait is organizing **"SCIENCE TECHNOLOGY AND INNOVATION 2022"** to showcase the talents of craving young minds in the areas of Science, Technology and Innovation under the aegis of the Board of Directors, Indian Schools in Oman.

STAI 2022 competitions will run in a hybrid mode with a few events online and the rest offline.

The aim of this event is to encourage the participation, retention and advancement of students in science, technology and innovation. It gives school students chance to explore new ideas, deepen their knowledge and spark their interest in **STAI**.

Competitions are great opportunities for the students to put their scientific knowledge and skills to the test. They also teach them the relevance of their learning, as well as the importance of teamwork, success and failure.

We invite all students from Indian Schools to make use of this opportunity.

We are pleased to invite Private, International and Ministry schools also to take part in Mathematics and Science Exhibition (offline) and Science e-Magazine (online).

"Creativity is thinking up new things. Innovation is doing new things."

Theodore Levitt

Motivate your students through competitions and inspire them to love STAI.

Team Indian School Darsait

STAI 2022

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INDEX

STAI 2022

Events are conducted under the domains of Mathematics, Science & IT in the following two categories:

- Junior : Grade V to Grade VIII
- Senior : Grade IX to Grade XII

EVENT DESCRIPTION

Students from Grades V to XII are welcome to take part in the following arenas:

- Science and Mathematics Exhibition
- Science Skit
- Digital Symposium
- Mobile App Development
- Science e-Magazine
- Code Wars

➢ The participating school will announce the competition details, rules & regulations and dates of the selection to their students in advance.

➢ Registrations will be accepted only in the prescribed format which will be sent to the participating schools in due course.

➢ Each School can send a maximum of one entry for each competition under each category.

➢ For all competitions, selection rounds are to be conducted at the school level on the dates fixed by the respective schools.

➢ Entries will be short listed based on the criteria mentioned in the Handbook by the selection committee of the participating schools.

➢ Each criterion is given 10 points. The scores are collated and final scores are graded as A+, A, B+ & B.

➢ Certificates of Merit will be awarded to:
- 1st 1/4 of above the mean points: A+ Grade
- 2nd 1/4 of above the mean points: A Grade
- 3rd 1/4 of above the mean points: B+ Grade
- 4th 1/4 of above the mean points: B Grade

Others scoring below the mean point will be given certificates of participation.

➢ The grades represent the performance of the participants as defined below:

Grade	Performance
A+	Outstanding
A	Excellent
B+	Very Good
B	Good

- ➢ All participants will receive a Participation Certificate.
- ➢ Selected entries will be awarded with Merit Certificate.
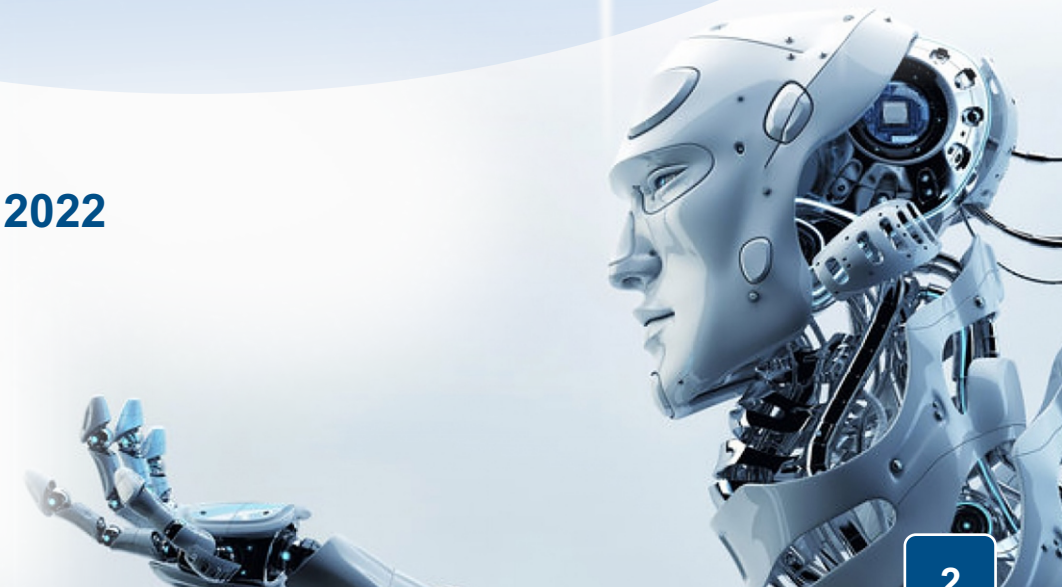- ➢ Judges' decision will be final.

REGISTRATION GUIDELINES

Schools are expected to fill the registration form in the prescribed format sent by host school for the following events:

- ➢ Code Wars
- ➢ Mobile App Development
- ➢ Digital Symposium
- ➢ Science and Mathematics Exhibition
- ➢ Science Skit
- ➢ Science e-Magazine

Last Date for Registration: 11th August 2022

SUBMISSION GUIDELINES (Videos/Photographs)

- Schools must send their entries in the prescribed format indicated below to the respective Google Drive Folders provided by the Host School. The link to the Google Drive Folders will be active to upload entries for Science Skit, Mobile App Development, Science e-Magazine and Code Wars from 8:00 a.m. of 14th August to 5:00 p.m. of 16th August 2022.

- Each participating school should designate a School Coordinator for STAI 2022.

ENTRY FORMAT

- The **STAI** organizing committee must receive the entries in the format given below:
- **VIDEO:** High resolution, MP4 format.
- **PHOTOGRAPH:** JPEG/JPG
- The file names for various competitions should be in the following format:
  School Code- Event Code- Serial Number of the Participant (For Eg: 101-ST01- xxx)

Note: Performances should be original in nature and recorded in a single take without adding any special effects.
Participants should upload their latest Passport size photograph with white background (JPEG/JPG) as a part of registration process.

SCHOOL CODE

S. No.	Name of School	School code for STAI
1	Indian School Al Ghubra	101
2	Indian School Al Maabela	102
3	Indian School Al Seeb	103
4	Indian School Bousher	104
5	Indian School Buraimi	105
6	Indian School Darsait	106
7	Indian School Ibra	107
8	Indian School Ibri	108
9	Indian School Jalan	109
10	Indian School Khasab	110
11	Indian School Masirah	111

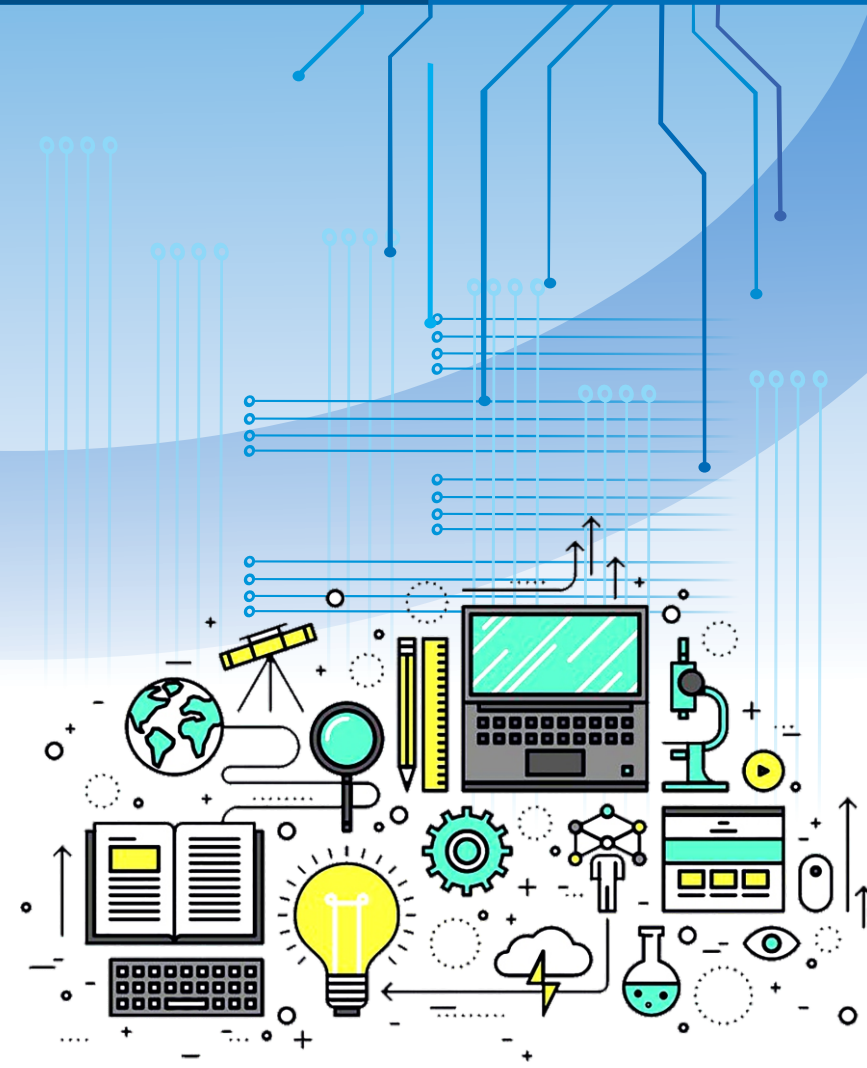| S. No.	Name of School	School code for STAI
12	Indian School Muladha	112
13	Indian School Muscat	113
14	Indian School Nizwa	114
15	Indian School Rustaq	115
16	Indian School Saham	116
17	Indian School Salalah	117
18	Indian School Sohar	118
19	Indian School Sur	119
20	Indian School Thumrait	120
21	Indian School Al Wadi Al Kabir	121
22	Care & Special Education (CSE)	122

IMPORTANT DATES

- Registration Opens : Monday, 8th August 2022
- Registration Closes : Thursday, 11th August 2022
- Opening of Google drive to upload entries : Sunday, 14th August 2022
- Closing of Google drive to upload entries : Tuesday, 16th August 2022
- Inaugural Ceremony : Saturday, 27th August 2022
  09:30 a.m. – 11:00 a.m.

- Visit to the Exhibition by the Chief Guest and other dignitaries : Saturday, 3rd September 2022
  04:00 p.m. – 05:30 p.m

- Valedictory Function : 05:00 p.m. – 07:00 p.m.

EVENTS AT A GLANCE

S. No.	EVENTS		CATEGORY	EVENT CODE
1	Exhibition	Mathematics	Junior	ST03J
		Science	Senior	ST03S
2	Science Skit		Open	ST05P
3	Digital Symposium		Senior	ST02S
4	Mobile App Development		Open	ST04P
5	Science e-Magazine		Open	ST06S
6	Code Wars		Senior	ST01S

Science Exhibition Topic: Science and Technology for Global Sustainability.
Mathematics Exhibition Topic: Mathematics in Astronomy.

General Guidelines:

1. Mathematics and Science exhibits should be a working model as per the given topic.
2. Two entries from each school are allowed, one entry from the Junior Category for Mathematics (Classes V to VIII) and one entry from Senior Category (Classes IX to XII) for science exhibits. Number of students is restricted to three per exhibit. The participants should not be from the same grade.
4. The venue will be open at 09:00 a.m. on Saturday, 3rd September 2022 for displaying the exhibits. The exhibits should be ready before 01:00 p.m. for the judgement.
5. All materials including display charts/foam boards, white cloth for tables, extension cords, double sided tape etc. for the exhibition should be arranged by the respective schools.
6. Hazardous substances should not be used in the exhibit.
7. The power sockets and tables will be provided by the host school.
8. The area allotted to display the exhibit is 3m x 2m in size.
9. The exhibits should be dismantled and taken away on the same day.
10. Host School will arrange judges for the event.
11. Dress code for the participants: Formal.
    School uniform will not be allowed.
12. Identity of the school should not be disclosed/displayed by the participants.
13. The decision of the judges will be final.
    Evaluation Criteria:
    - Display (Organization)
    - Science (Principle)
    - Creativity (Innovative Idea)
    - Originality
    - Ingenuity
    - Oral Presentation
    Total: 50 Points

SCIENCE SKIT

Topic: Integrated Approach in Science and Technology for a Sustainable Future

General Guidelines:

1. Only one team comprising of 6 to 8 students will be allowed from each participating school.
2. The medium of presentation will be English.
3. Duration of the skit including introduction should not exceed 10 minutes. There will be negative marking for exceeding the time limit.
4. Digital backdrop will not be allowed for the competition.
5. The costumes, dialogues and make-up should be appropriate respecting the culture and traditions of Sultanate of Oman. Appropriate backdrop, props and costumes are recommended.
6. Content related to ethnicity, religion & race are strictly prohibited.
7. Reading/referring to script will not be permitted during the skit.
8. The decision of the judges will be final.
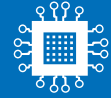9. Identity of the school should not be disclosed by the participants.
   Evalua on Criteria:-
   - Relevance to the topic
   - Synchronization with presentation
   - Voice Modulation/Facial Expression/Poise/Body Language
   - Set Design & Props
   - Overall Performance
   Total: 50 Points

Topic: Artificial Intelligence : Past, Present and Future

General Guidelines:

1. The duration of presentation will be 10 minutes which includes 7 minutes of digital display and 3 minutes of question and answer session. There will be negative marking, if the time limit exceeds during the presentation. A warning bell will be sounded at the end of 6.5 minutes and the final bell at the end of 7 minutes.
2. Students from Classes IX to XII of Academic Year 2022-23 can participate. There can be two participants from each school. However, the team can have a third participant as an assistant from the same category to operate the laptop. The two participants presenting should not be from the same grade.
3. The language of presentation will be English.
4. Name of School should not appear in the presentation and the Presenter should not reveal the identity of his/her school during presentation.
5. Dress code for the participants: Formal.
6. The participating school should make arrangement for Laptop & USB.
   USB should be handed over to the STAI Coordinator of the host school in advance on the event day.
7. Host School shall provide the projector, screen etc. at the venue.
8. The decision of the judges will be final.
. **Evaluation Criteria:**
   - Content
   - Digital Presentation
   - Clarity and Body Language
   - Creativity and Execution
   - Response to Questions

   Total: 50 Points

Topic: Educational Learning App

General Guidelines:

1. The competition is to develop a Mobile App (Android based) for educational purposes.
2. A maximum of three participants in a group will be allowed.
3. Participants can choose any open source software/online tool that meets their functionality and purpose.
4. The team members should have required knowledge about the programming and design of their app development project.
5. The use of frameworks or templates from other people or third-party are not allowed.
6. The final project must be originally created and is not the result of plagiarism.
7. Ethnicity, religion, race, intergroup relations and pornographic content are strictly prohibited in the project.
8. Components included in the project must be free from copyright.
9. Team members must upload video (MP4) describing the project. Maximum duration of video: 3 minutes.
10. The team has to demonstrate the App to the judges on the day of interaction.
11. Participating teams should ensure stable internet connectivity for the interactive session. Time and platform for interactive session will be informed by the host school through the School Coordinators.
12. Participants are allowed to present the app on screen. The Source Code must be shown to the judges' when asked for and the participants are expected to answer the questions based on the code.
13. Participants may download any of the screen mirroring software like ApowerMirror, Team Viewer or Vysor which could be used to show the app on the computer screen.
14. The decision of the judges will be final.
    Evaluation Criteria:
    - Originality and Creativity
    - Structure and Navigation
    - Functionality and Applicability
    - Design and Development Skills
    - Presentation Skills
    Total : 50 points

SCIENCE e-MAGAZINE

Topic: Vision Oman 2040: Role of Science and Technology

General Guidelines:

1. A maximum of three percipients will be allowed in a group.
2. e-Magazine should be in web page format.
3. Participants can choose any of the web designing software to design the pages.
4. The home page should have the topic given and content should be furnished in the beginning.
5. The images/videos that are visible on web page must be saved in your images folder and linked from there.
6. Proper referencing/link should be provided with regard to any content used from the internet in the e-Magazine.
7. The use of frameworks or templates from other people or third-party are not allowed.
8. The e-Magazine must be an original work of the participants.
9. Elements such as ethnicity, religion, race, inter-group relations and pornographic elements are strictly prohibited.
10. Team members must send a video (MP4) describing the e-Magazine and the team has to present the same to the judges on the day of interaction.
11. Participants are allowed to present the e-Magazine on screen. The e-Magazine must be shown to the judges when asked for and the participants are expected to answer the questions based on the designing.
12. Participants may download any of the screen mirroring software like ApowerMirror, Team Viewer or Vysor which could be used to show the e-Magazine on the computer screen.
13. The decision of the judges will be final.

Evaluation Criteria:
- Design and Development Skill
- Quality and Quantity of Information
- Visual Appeal and Style
- Originality of the Work.
- Presentation Skill.

Total: 50 Points

CODE WARS

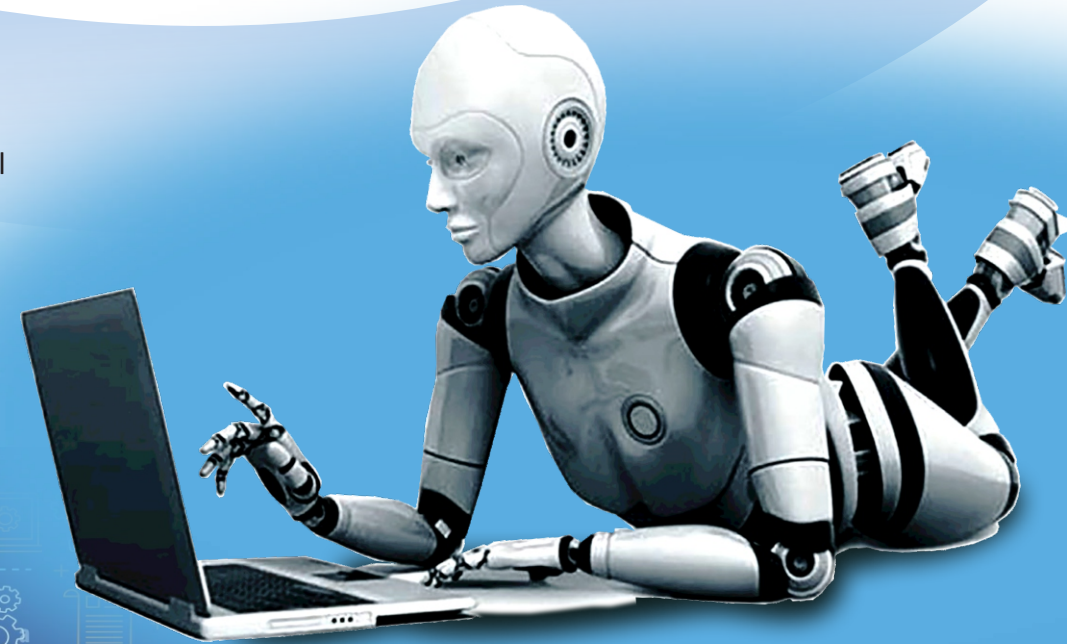**Theme: Solving real life problems through coding**

General Guidelines:

1. The Aim of this event is to design, build and present the most innovative solution to a real life problem.
2. Participants should create an Algorithm, Flow Chart and Source Code for the problem.
3. The topic for the event will be shared with the School Coordinator one week prior to the competition date.
4. A maximum of three participants will be allowed in a group.
5. Participants can choose any programming language to develop the source code.
6. The team members should have adequate knowledge about the programming language, Algorithm and Flow Chart.
7. The final project must be an original work of the participants.
8. Team members should submit a project file in the pdf format comprising of Content, Introduction, Algorithm, Flow Chart, Source Code and Conclusion.
9. Participating teams should ensure stable internet connectivity for the interactive session. Time and platform for interactive session will be informed by the host school through the School Coordinators.
10. Participants are allowed to present the source code on the screen. The source Code must be shown to the judges when asked for and the participants are expected to answer the questions based on the code.
11. Participants may download any of the screen mirroring software like ApowerMirror, Team Viewer or Vysor which could be used to show the output on the Computer screen.
12. Decision of the judges will be final.

Evaluation Criteria:
- Originality and Creativity
- Coding Skill
- Functionality and Applicability
- Problem Solving Skills
- Presentation Skills

Total: 50 Points