STAI

BOARD OF DIRECTORs
indian schools, sultanate of oman

INDIAN SCHOOL SALALAH

Science Technology & Innovation

CURIOUS BY HEART, CREATIVE BY MINDS

25th & 26th September 2021

Hosted by Indian School Salalah

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STAI 2021

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Handbook of Events

HANDBOOK CONTENT

"CURIOUS BY HEART, CREATIVE BY MINDS"

OBJECTIVE: To provide a platform to showcase the talents of craving young minds in the areas of Science, Technology and Innovation.

Science and technology open up boundless opportunities to the curious and creative young minds, and streamline them to useful innovations for a better tomorrow.

Indian School Salalah, under the aegis of the Board of Directors of Indian Schools in the Sultanate of Oman, is extremely delighted to present the mega inter-school learning exchange programme, STAI-2021edition (Science, Technology and Innovation).

This distinctive event in Science, Technology and Innovation recognizes remarkable talent early on, fostering individual growth for the students who are willing to challenge themselves through science research.

This event is a platform where students can showcase their passion, dreams and contemporary idea in the fields of Science and Technology. We offer the innovative and imaginative minds a plethora of avenues to explore and experiment.

We invite all students from Indian Schools to make use of this opportunity to nourish and nurture their scientific, technological and innovative ideas.

"The reward of the young scientist is the emotional thrill of being the first person in the history of the world to see something or to understand something. Nothing can be compared with that experience."

Join us and taste the experience!

Team IS Salalah

LIST OF EVENTS AND CATEGORIES

SL.NO	CATEGORIES	CLASSES
1	GROUP -A	XI &XII
2	GROUP-B	IX &X
3	GROUP-C	VI,VII &VIII

STAI 2021

SL. NO	NAME OF THE EVENT	DESCRIPTION OF THE EVENT	CATEGORY
1	Design 3 D Model	Participating students will have to send an uncut 30 minute video of designing a 3 D model of their school building	GROUP A GROUP B
2	Develop CHATBOT – AI Project	Participating teams will have to develop a CHATBOT for their school	GROUP A GROUP B
3	Computer Game Development	Participating teams will have to develop a computer game that can be used for Edutainment	GROUP A GROUP B GROUP C
4	Mobile App Development	Participating teams will have to develop Mobile App for Android platform useful for students/society	GROUP A GROUP B
5	Science Based Debate	Debate based on a science topic.	GROUP-B
6	Science And Mathematics Quiz	Quiz competition based on Mathematics and Science.	GROUP-A
7	Science Spell Bee	Spell bee competition based on scientific terms.	GROUP-C
8	Science Comic Strip	Contestants draw the comic strips at the given time. (Google platform) Theme will be given.	GROUP-C
9	Animated Stick Puppet Show	The puppeteer first creates a cast of physical puppets using paper, markers, pencils, colours, scissors, stick and glue. Physically moves these puppets to tell a story. Theme of the show – 'Life of a scientist'	GROUP-B
10	Science Photography	Any photograph that demonstrates or explains a scientific, technological, engineering, mathematical concept or phenomenon.	GROUP-A

EVENT: DESIGN 3D MODEL [GROUP A&B]

GENERAL DESCRIPTION

The objective of this event is to help students improve their Design Vocabulary. Participant can use any 3 D designing tool including open source tool /software to design a 3D model of the participant's school building. This event aims to showcase the following talents of the students - Ability to pay attention to details, visualization skills, ability to take feedback and make changes as required, aesthetic skills, design skills and technical skills.

GENERAL INSTRUCTIONS

This contest intends at portraying the real world and conceptualize visuals of monuments, buildings etc.

Participants can use any 3 D Designing tools or open source 3d modelling tools. For example tools like Tinker cad, 3d paint etc.

The participants can choose the tool or app of their choice and convenience.

Model will be validated with a 30 minute model making video.

Each model engineered and submitted in this contest will be called an "entry".

One entry per school will be invited to enter the contest. All invited entries received will be judged using the following criteria:

RULES AND REGULATIONS

- The event will be conducted for the categories –A [XI & XII] & B [IX & X]
- Single entry will be allowed from each category from the participating schools.
- **Participants will have to make a 3d model of their <u>SCHOOL BUILDING</u>.**
- This will be an individual event.
- Event coordinators of the participating schools will do the initial selection and will send only two entries(A & B) from their schools.
- 3 D model will be made using any 3 D Designing tools or open source 3d modelling tool.
- Participants are not allowed to use templates available in the model making tool, if used then that may lead to disqualification.
- Each participant will prepare a 30 minute video consisting of 3 D model making (including participant in the video) right from scratch to finish and also an image of the finished product.
- The event coordinator of the participating schools will send this mp4 uncut file two weeks before the STAI 2021 Day 1 (to the host school event coordinator's email ID)
- After the coordinator of host school receives the 30 minute video, the final 3D model will be broadcasted on the event day.
- Time taken for evaluation is 10 days.
- The 30 minute video will be shared to judges for the judging.
- Judges will judge according to the criteria mentioned below.
- Platform used will be Zoom.

JUDGEMENT CRITERIA

- Originality – This criteria will be judged as how original the model is, and not a copy from any other source, like a professional or internet. (10 marks)
- Colour Balance – This factor will make sure how well or how bad the colours are sinking-in in the 3d model. (10 marks)
- Realism – How realistic the model is (10 marks)
- Quality – (10 marks)
- Rendering – (10 marks)

EVENT: AI PROJECT – CHATBOT [GROUP A&B]

GENERAL DESCRIPTION

The objective of this contest is to give opportunity for students to understand the trend in IT and the application of AI in educational institutions. In this event, each participating team will create the best CHATBOT by improving/customizing the existing 'open source chatbot' for the best user experience. The event aims to showcase the following talents of the students - Adaptability for AI – Future ready, Coding skills, Use Case, Abilities as a Team Player and Technical Proficiency.

GENERAL INSTRUCTIONS

Build a CHATBOT that can converse with viewers in order to improve the interaction between parents and the school, creating an entirely **new viewing experience**.

You can build your CHATBOT however you'd like (voice assistant / chat / character) but it cannot be just a simple BOT (questions and answers). It must interact with viewers.

Your CHATBOT could automatically connect to the open source data which can be obtained from various Internet resources. If you don't find the data you need in the existing APIs, you can make up your own data sources.

CHATBOT developed can be used in the school website or as a Mobile app.

CHATBOT must be presented using a device as per participant's choice.

Each CHATBOT created and submitted in this contest will be called an "entry".

All eligible entries will be invited to enter the contest. All invited entries received will be judged using the criteria given below.

RULES AND REGULATIONS

- The event will be conducted for the categories –A [XI & XII] & B [IX & X]
- Two teams are allowed to participate from each school, with one team from each category.
- No. of participants: 3 members in each team
- SUBJECT : A CHATBOT for the School.
- Each team will prepare a presentation (PPT converted to video) about the CHATBOT developed which shows the participants involved, the features, screenshots of stages of development. Max duration of video: 3 minutes. Format of video: MP4
- The participants have to use only 'FREE and OPEN SOURCE' Technologies and data. The participants have to give information regarding the source and license of the technology and data used. (Example : GPL, Creative Common, Apache).
- The chatbot thus created should not be like a chatterbot
- All the files (source code) of the project must be sent 5 days prior to the interaction of participants' team with the Judges.
- Documentation of the source code is appreciated and a Synopsis to be sent during registration.

The event coordinator of the participating school will send all the files of the source code and Presentation video at least 5 days before the interaction with the Judges to the event coordinator of the host school.

Each team will be given 5 – 10 minutes for demonstration of chatbot developed. After demonstration, there will be interaction with the Judges.

Participating teams should make all the necessary hardware and software arrangements required for online demo/presentation of the chatbot to the Judges. Participants have to ensure good internet connectivity to present within the time allotted.

Interaction of team with the Judges will be scheduled 10 days before the STAI 2021 Day 1.

Members of the team should be present at the day of judgement and judges' decision will be final.

JUDGEMENT CRITERIA
- User friendly – 10 marks
- Innovation -10 marks
- Originality (of Source Code) – 10 marks
- Feasibility of the Project and the ability to be operational quickly -10 marks
- Features of the program -10 marks

EVENT: Computer Game Development [GROUP A, B&C]

General Description

The objective of this competition is to simulate a virtual environment for problem solving. Enhance multitasking skill of students. Participating teams have to design and develop an edutainment Computer Game for students. This event aims at showcasing the following talents of students - Ability of the student to create dynamic situations/challenges and how to solve them, design and coding skills, presentation skills, collaborative development, capability to train/solve a problem through games etc.

GENERAL INSTRUCTIONS

The contest aims to develop a computer game based on **Edutainment**.

Participants can use any open source tool/website/Game Engine for Computer Game development.

The Computer Game has to be created for Windows platform.

The Computer Game must be demonstrated on computer devices.

All eligible entries will be invited to enter the contest. All received entries will be judged using the criteria given below.

RULES AND REGULATIONS

• The event will be conducted for the categories:
• Category - A [XI & XII]
• Category - B [IX & X]
• Category –C [VI to VIII]
• Three teams are allowed to participate from each school, that is one team from each category
• No. of participants: 3 members in each team.
• Game can be made using any software available either using online tools /Open Source/ Game Engine.
• Each team will demonstrate it on the day of evaluation.
• The event coordinator of the participating schools will send the SOURCE CODE/ Screenshots of development stages of game with the summary of the progress that has been made and what will be implemented in the Game. The coordinator of each school will hand over the assets to the event coordinator of the host school (E-mail ID will be shared) 4 days before the interaction with judges.
• The interaction of participating teams with the judges will be 10 days before the STAI 2021 Day 1.
• Each team should be ready with the GAME to be presented in front of the judges on the day of interaction with the Judges. The team must brief about the game and then present the DEMO to the judges.
• Participating team should make all the necessary hardware and software arrangements required for online presentation of the Game to the Judges. Participants have to ensure good internet connectivity to present within the time allotted.

Judges will ask questions based on the GAME developed and the presentation by team members to check the originality, features, user-friendliness, innovation, coding and design aspects.

Each team will be given 5-10 minutes to present their Game.

Members of the team should be present at the day of evaluation and judges' decision will be the final.

JUDGEMENT CRITERIA
- Originality (uniqueness of game concept) -10 marks
- Creativity -10 marks
- Design and development skills (the impact of the user interface) -10 marks
- Objectives Achieved. -10 marks
- Presentation skills – 10 marks

EVENT: DEVELOP MOBILE APP [GROUP A&B]

GENERAL DESCRIPTION:

The objective of this event is to develop a mobile app which has innovative idea. This event provides opportunity for students to shift from casual end-users to developers of mobile app. The event aims at exhibiting the following talents of the students - Ability of the students to implement ideas into reality, their design and coding skills, selection of best tools/features for implementing their ideas, ability to present the product in a user-friendly manner, collaborative development, convince whether they are future ready etc.

GENERAL INSTRUCTIONS
1. The contest aims to develop a mobile app useful for students/society.
2. Participants can use any open source tool/website for developing the mobile app for android platform.
3. Participants can use simulator if required.
4. App should be developed for Android Platform
5. App must be demonstrated on real devices or on simulator
6. Each mobile application created and submitted in this contest will be called an "entry".
7. All eligible entries will be invited to enter the contest. All invited entries received will be judged using the criteria given below.

RULES AND REGULATIONS
1. The event will be conducted for the categories –A [XI & XII] & B [IX & X]
2. Two teams are allowed to participate from each school with one team from each category.
3. No. of participants: 3 members in each team
4. Synopsis must be submitted at the time of registration(E-mail to the Event coordinator –Mobile App development)
5. Tools for App Development: Using any open source software/ online tools
6. The event coordinator of the participating school will send, the APK file and short presentation video of App Developed, 14 days before STAI 2021 Day 1 to the event coordinator of the host school.
7. Each team will prepare a presentation (PPT converted to video) about the app which shows the participants involved, objective, the features of app, screenshots of stages of development. Max duration of video: 3 minutes. Format of video: MP4
8. Each team will demonstrate the app on the day of interaction with the judges.
9. Participating team should make all the necessary hardware and software arrangements required for online presentation of the App to the Judges. Participants have to ensure good internet connectivity to present within the time allotted.

10.Judges will ask questions based on the app developed and the presentation by team members to check the originality, features, user-friendliness, innovation, coding and design tools used.

11.The organizers of STAI reserve the right to accept or reject the App which might be offensive or pose a safety threat to the participants or general public.

12.Each team will be given 5-10 minutes to present their App

13.Members of the team should be present at the day of judgement and judges' decision will be the final

14. The interaction of participant team with the judges will be 10 days before the STAI 2021 Day 1.

JUDGEMENT CRITERIA

1.Usefulness of the app   - 10 marks
2.Innovation and Originality - 10 -marks
3.Features and Interface design of the App - 10 marks
4.Ability of the students in selecting/using the right tools for developing the app   - 10 marks
5.Proper Presentation of the App by team members – 10 marks

EVENT: SCIENCE DEBATE [GROUP B]

General Instructions:

Each school can register only two speakers – one proposing the motion and the other opposing the motion.

Use of webcam while speaking is mandatory.

The host school (Indian School SALALAH) will not be responsible for the internet connectivity of the participants. Hence, it is absolutely essential for the participants to use hassle-free internet devices for the smooth and continuous conduct of the competition.

The motion for the debate will be given only three hours before the competition.

The limit for each speaker is 3 minutes per motion.

At the end of the tenth speech (5 For and 5 Against), the rebuttal speech (1 minute per speaker) will commence in the same order.

The order of presentation will be decided by drawing lots.

Display of charts or written document is not allowed while speaking. Reading out from a prepared script will result in loss of points.

Controversial statements detrimental to any individual, religion, country and political statements should be avoided.

The contestants should be smartly dressed. There should be no indication in the dress to suggest the identity of their school.

The team securing the highest score (total score of 'For', 'Against' and 'Rebuttal') will be declared the winners.

In addition to the team trophy, merit certificates will be awarded to all participants who will score above the mean score derived by adding aggregate individual scores.

1. Top 1/3 above Mean Score – A+ Grade
2. Middle 1/3 above Mean Score – A Grade
3. Bottom 1/3 above Mean Score – B Grade
4. Below Mean Score- Participation Certificate

JUDGING CRITERIA: TOTAL MARKS – 50

☐ Content – 15 marks
☐ Diction and Clarity – 10 marks
☐ Persuasion – 10 marks
☐ Presentation style – 10 marks
☐ Rebuttal – 05 marks

The time allotted for a speaker is 3 minutes. A warning signal will be displayed/sounded at 2 ½ minutes and a final reminder at 3 minutes. Anything spoken after the final bell will not be marked for evaluation. Those who violate the prescribed rules will not be eligible for receiving Certificates of Merit.

EVENT: SCIENCE AND MATHEMATICS QUIZ [GROUP A]

Rules and Regulations

- A team of two students will register from each participating School.
- Team of two students should sit together during quiz competition.
- In case the pandemic prevails the Competition will be an individual event where every school will have only one participant to represent.
- The online Quiz will be conducted by the Quiz master and questions will be made available to the students during the time of the event.
- Each team need to log in through one device
- The competition will be a proctored event in order to have a fair competition.
- The participants should be ready with their mobile phone during the event as it will be considered as a buzzer.
- The participants are responsible for the internet connectivity.
- The Quiz Questions will be based on Mathematics, Science, Technology and Innovation.
- Competition will have different rounds including buzzer rounds.
- All the other required instructions will be given by the Quiz Master on the day of the event.
- As it's a Team event we the host school request the participating school to provide a common place in the school itself for the team to take part in the event.
- Team should display their school name as backdrop.
- Team should not keep virtual background during competition.
- In the event of malpractice by any participant, that team will be disqualified.
- Team should keep their camera on throughout the competition.
- Head phones are not allowed during the competition.
- Team members will be on school uniform with blazers.
- Quiz master's decision will be final.

EVENT: SCIENCE SPELL BEE [GROUP C]

RULES

General Instructions
- This event will be conducted for the Junior category (Classes 6 to 8)
- The participating school can register **only one** student for this event.
- Ensure to use quality device to enhance the clarity of the words spelt.
- If the participant adopts any unfair means, he/she will be disqualified.
- This event consists of 3 rounds:

First Round – Identify the word and spell it
- In this round each contestant will be asked to spell 3 words.
- Time allotted to spell each word is 15 seconds.
- The Meaning / Definition of each word will be given.
- The number of letters each word consists of, will be displayed on the screen with blanks.
- The top scorers will be qualified for the second round. (Max.15 students)
- If the number of participants exceed 15, then it will be followed by a tie breaker.

Second Round – Ocular Round
- The second round is the Picture Round.
- One picture each will be shown to each contestant.
- Identify the picture and spell it.
- Time allotted is 15 seconds.
- This is a spot elimination round.
- If the number of participants exceed 7, then it will be followed by a tie breaker.

Third Round – Rapid Fire
- The third round is the Rapid-Fire Round.
- Each contestant will be given 10 words to be spelt in a minute.
- The one who spells the maximum number of correct words will be the winner.

NB
- Ensure to use strong bandwidth network.
- The host school is not responsible for any technical / network issues faced by the participant.
- The maximum number of participants qualifying for the second and the third round may vary depending upon the number of schools that participate in the event.
- For all rounds, judges' decision will be final.

Comic Strips

Comic strip, series of adjacent drawn images, usually arranged horizontally, that are designed to be read as a narrative or a chronological sequence. Comic strips are used to tell a story. They have three main parts of a story: setting, characters, and plot. Comic strips use words and pictures equally. Comic strips use a series of frames to show story movement. The story is usually original in this form.

Level of Competition:

Group – C [Classes 6 to 8]

Mode of Conduct:

LIVE online competition conducted through google meet.
Completed work should be uploaded in the given time frame based on a science or technology based story.

General instructions

- The students will prepare a comic strip narrating science or technology-based short story.
- The participants have to prepare a story based on the topics given. They are supposed to incorporate science or technology in their story.
- Topics will be provided half an hour before the competition.
- The participants are given 30 minutes to plan their story and then they need to draw for next one hour.10 minutes time is given for uploading the work showing their progress. Within next one hour they have to finish their work and are allowed to take 10 minutes for uploading the completed work.
- The participants should have proper internet connectivity and no technical assistance will be provided from the host school.
- Two students are allowed to participate from each school.
- The entire competition will be recorded.
- Time allotted –30 minutes for planning +2 hours + 20 minutes (Total10 minutes for uploading the strips for showing the progress after one hour +10 minutes for uploading the completed work, once it is over)
- Rules and regulations

- The comic strip should be based on a scientific concept or technology and need to be presented as a story.
- The story has a hero or heroine who has special powers scientifically defined.
- The students can create their own super heroes.

- The story should be given an appropriate title.
- They are not allowed to take any dialogue or stories which are already available (It should be genuine and novel; no plagiarism)
- The students are allowed to use either black colour pen/sketch pen/marker pen/black colour pencil.
- Maximum 4 strips should be drawn in an A4 size chart paper. You are allowed to use maximum 5 A4 size chart papers .(Can be landscape or portrait)
- There should be minimum 10 strips to a maximum of 20 strips arranged in a proper sequence.
- The students should not write their name or the name of their school in the comic strips
- In each page, the participants should write the ID number given from the host school and it should be shown to the convenor of the event.
- The camera and the microphone of the participants should be turned on though out the competition.
- The camera should be adjusted in such a way that the progress of drawings should be visible clearly.
- The participants are allowed to keep only 5 papers and the drawing materials should be on top of the table.
- The participants should upload their progress of work during each half an hour in the JPG format.
- Comic strips should be readable and logically coherent from left to right.
- Inappropriate content will not be permitted. There should be no violence depicted in any part of the story.
- The final work should be uploaded in PDF format with clarity for proper evaluation. Unclear work uploaded will not be considered for evaluation.

Evaluation criteria

Presentation	10 marks
Creativity	10 marks
Scientific concept used	10 marks
Theme behind the story	10 marks
Proper sequencing	10 marks

EVENT: ANIMATED STICK PUPPET SHOW [GROUP B]

General guidelines
- This event is conducted for students of classes 9 &10 .
- Each school will have one participant to represent.
- Theme of the show must be based on '**Life of a scientist'.**
- Each performance must have a title.
- The medium of language for the show is English.
- Participants can use only **stick puppets** and it should be creative and plausible.
- The backdrop must be original (virtual backdrops are not allowed) and effective.
- Non-copy right music/ sounds are allowed. The participants must provide their own means to play music/ sound effect.
- The performance must be within 6 -7 minutes.
- Participants should send complete video of the puppet show in MP4 form and with a written script (soft copy) of the same at least 5 days before the event.

Evaluation criteria
- Puppet show will be assessed based on the criteria given below:
- Quality of the script (5 marks)
- Proper movements of the puppets including entry and exits (5 marks)
- Voice modulation -to match puppet (5 marks)
- Overall performance of the puppeteer (5 marks)
- **Total – 20 marks**

EVENT: SCIENCE PHOTOGRAPHY [GROUP-A]

Science photography competition aims to take photography to the next level by incorporating science around us with photography.

We observe many scientific phenomena around us. Encouraging youngsters to explore science from what they capture…from the sunrays to the rainbow, from a bubble to the rain drops, from smoke to light, from flora to fauna is what the competition aims at.

Objectives

- Enhancement of scientific exploration and application, depicting its impact on our everyday lives and illustrating how photography helps record and explain global issues and scientific events.
- Engaging students in incorporating the artistic abilities with science
- Exploring visual aspects of various science related concepts and phenomena through photography.
- Encouraging students to capture images to demonstrate and communicate global issues such as climatic changes etc.
- Develop scientific aptitude and observation, towards nature and its mystical aspects

Rules of the Event:

•Each School may submit two entries for judging.

•Two students from each school can participate in the competition.

Two photographs(Primary image/Raw image and a supporting image)that demonstrates, communicates or explains a scientific, technological, engineering, or mathematical concept or phenomenon is eligible.

•The contestant should attach a brief description of the concept or phenomenon associated with each of his/her photograph.

•Photos must be the sole work of the contestant.

The files can be submitted in the following formats

JPEG, JPG, TIF, RAW

Note:

Minor editing, modification such as colour corrections and adjustments are acceptable.

Attach the RAW image of the picture taken.

- Along with the Raw Image a supporting image with respect to the primary image (An image taken from a different angle) can also be submitted in addition to the primary image submitted for the competition.
- **MODE OF CONDUCT OF THE EVENT**
- Schools will be intimated regarding the details of the registration.
- After the verification of the registered details, participants will be allocated with the chest number.
- Participants must ensure to mention their chest number in the corner of the photograph and the same in the synopsis attached.
- The identity of the individual should not be revealed in their presentation.
- The presentations must be mailed to the provided mail id in the prescribed format within the given time.
- Entries will be disqualified on the basis of the criteria mentioned below:
- Photographs that are digitally or otherwise enhanced or altered for creative purposes. Altered Images refer to Photographs manipulated and applied with special effects (colorizing, toning, collage, photo composites, HDR, etc.)
- Photographs that have been submitted to or won in any other contests or have been published in print or online.
- Photos that violate another person's rights, including but not limited to copyright.
- Photos which are highly immoral, relatively obscene and/or in violation of public moral and/or public policy.

Judging criteria

Science related Content (40%):
- Innovative ideas/concepts: 10 marks
- Uniqueness/Originality: 10 marks
- Presentation of the theme (Write up): 20 Marks
- **Photography (60%)**
- Technical execution: 20 Marks
- Visual Appeal: 20 Marks
- Overall Impact: 20 Marks

Criteria to Award the certificates:
- Top 1/3 above Mean Score –   A+ Grade
- Middle 1/3 above Mean Score –   A Grade
- Bottom 1/3 above Mean Score –   B Grade
- Below Mean Score- Participation Certificate
- The decision of the judges is final and irrevocable.

CONTACT DETAILS

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The participating schools are requested to get in touch with the Event Coordinator of STAI – 2021 for any query related to the event