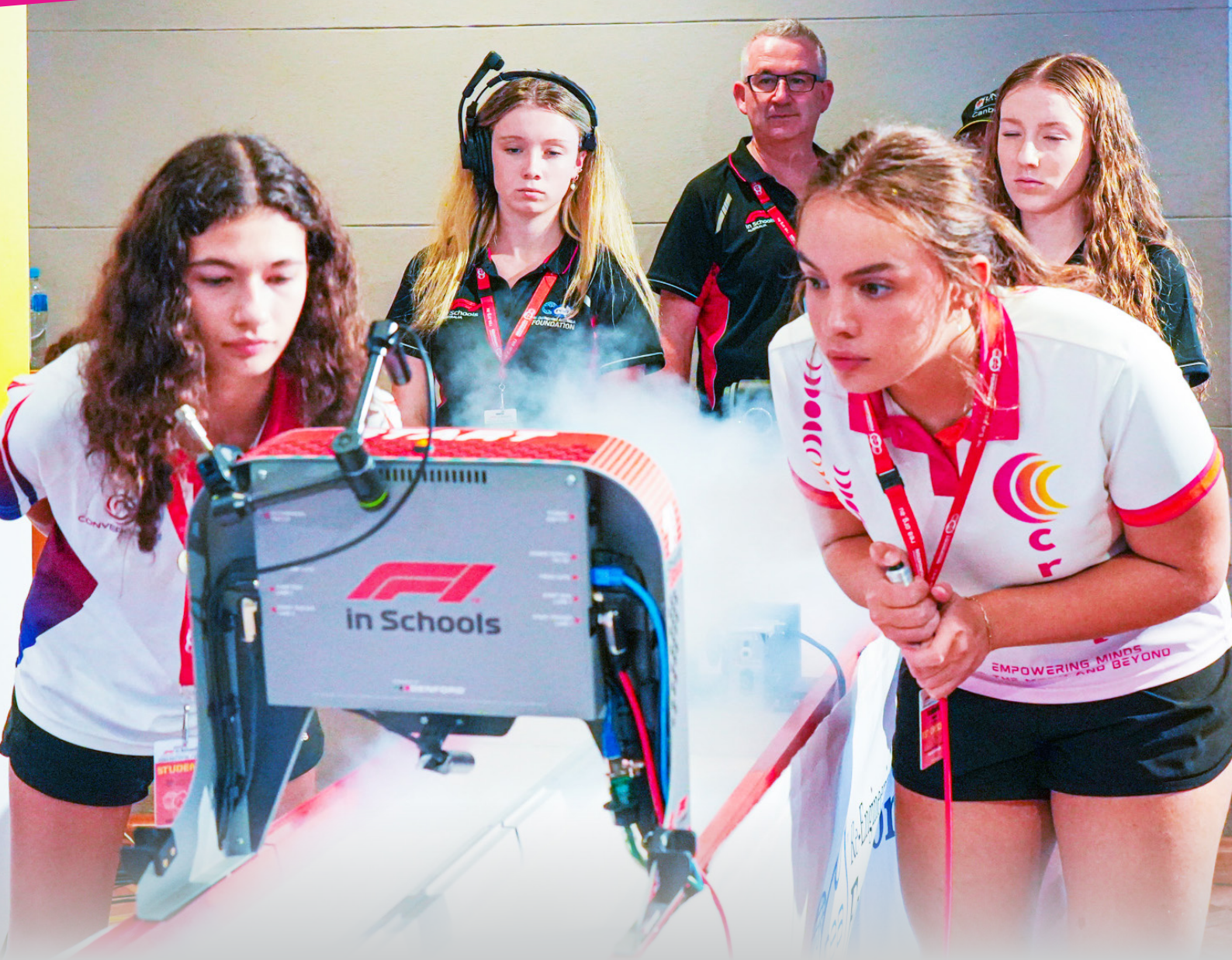# TECHNOLOGY, 3D PRINTING & SCIENCE INVESTIGATION AWARDS

ROYAL ADELAIDE SHOW

31 AUGUST - 8 SEPTEMBER

2024

COMPETITION SCHEDULE

CONTENTS

2

The Royal Agricultural and Horticultural Society makes every attempt to ensure that all information contained within this schedule is correct at the time of printing, however the RA&HS reserves the right to change such details as may be required.

HOW TO ENTER

ENTRY FEES (GST INCLUDED)

$5.00 per individual entry
$35.00 per team entry
Schools entering F1 and SUBS **MUST** submit two entries.
1. A Royal Adelaide Show Entry: www.theshow.com.au
2. REA Website

No entry fee requirement for Science Investigation Award classes.

ENTRIES

Complete the entry form available online at www.theshow.com.au

Entries in the F1 and SUBS in Schools sections must be made online via the REA website at www.rea.org.au

For any entry enquiries phone (08) 8210 5211 or email entries@adelaideshowground.com.au

Entries will be acknowledged via email.

CLOSING DATE OF ENTRIES

FRIDAY 19 JULY 2024 at 5.00 pm (CST)The following conditions will strictly apply:

The following conditions will apply to all entries:

- All entries must be received by the Society no later than 5.00 pm (CST). With the following exceptions
- **19 August 2024 for entries in the Science Investigation Awards section**
- Entry forms by post, facsimile or email will not be accepted.
- No entries will be accepted after the above closing date.

Absolutely no exception to the above conditions will be made to any exhibitor under any circumstances.

PAYMENT OF FEES

When paying fees, exhibitors must ensure that enough funds are available at the time of entry. Failure to do so may result in non-acceptance of entries. Cash payments are not accepted.

REFUNDS

No refund of entry fees for all competitors will be made after the closing date of entries.

MEMBERSHIP

It is not a requirement of entry to the Technology & STEM Inspired Innovation Competition to be a member of the Royal Agricultural & Horticultural Society of SA Inc, however we do ask you to consider becoming a member of the Society, which will greatly assist us in continuing to grow, promote and support South Australia's vital Primary Industries. There are numerous other benefits to membership, including unlimited entry to The Royal Adelaide Show, access to Members Dining and Bar facilities and even discounts for Taste of the Best and The Adelaide Showground Caravan Park.

Further information can be found at https://www.rahs.com.au/membership

CONTACT US

Email	entries@adelaideshowground.com.au
Phone	(08) 8210 5211, 9.00 am - 5.00 pm Mon to Fri
Event Coordinator	Chelsea Wilkinson
Website	www.theshow.com.au
Post	RA&HS – Technology Section, PO Box 108, GOODWOOD, SA 5034

YOUR PRIVACY

By exhibiting at The Show you acknowledge that you have read and agree to the privacy policy of the RA&HS which can be viewed here.

In relation to your entry into a competition we may specifically use and/or disclose your personal information to:

Communicate competition information to you such as entry opening dates, delivery and collection details and entry ticket distribution.

Publish competition results both online and in printed results listings.

Publish competition entries in Competition Catalogues.

Advise sponsors of competition prize winners for distribution of prizes from both the RA&HS and sponsors.

By entering into a competition, you consent to your contact details being provided to the sponsors of that competition for the purpose of distributing your prize. You also consent to your name, suburb and postcode being listed in a competition catalogue and, if you are a prize winner your name in competition results.

If you do not wish for your name and address to be printed in a competition catalogue please ensure that you select the 'Keep Private' option in your online exhibitor profile.

DELIVERY OF EXHIBITS

All exhibits to be delivered to the Technology Centre, Basketball Stadium.

Exhibits must be delivered between 8:30am and 12:30pm on Wednesday 22 August and accompanied by the Society computer printout of entry details.

Once exhibits have been received, the pavilion will be closed for judging.

Exhibits received after the set down time will not be judged or displayed.

COLLECTION

All Exhibits, Certificates and Ribbons are to be collected between 8.30 am and 11:30am or 3:30pm - 5:30pm on Tuesday 10 September unless administration has been notified before Monday 9 September via email to entries@adelaideshowground.com.au. All Exhibits, Certificates and Ribbons are to be collected on Tuesday 12 September and will be kept until Friday 19 September after which time they will be forfeited by the winner and destroyed.

GENERAL REGULATIONS

Exhibitors are reminded that the Society's General Regulations apply to all sections of the Show. A copy of the General Regulations can be obtained from the Society's website at www.theshow.com.au.

Exhibitors should note that the General Regulations contain a number of provisions relevant to competitions and this Schedule including but not limited to, offences, penalties, prohibited drugs. As those conditions apply in addition to the regulations contained within this schedule, Exhibitors should familiarise themselves with the General Regulations.

SPECIAL REGULATIONS

Exhibitors are reminded that the Special Regulations contained within this Schedule are merely supplementary to and subject to the General Regulations. The members of the Society's Technology Committee shall have the authority to act on behalf of the Society to take any necessary action under these Special Regulations.

RESTRICTION OF ENTRIES

There is no restriction on the number of entries per exhibitor in each class. However, should the number of entries received exceed the number which can be accommodated, the Society reserves the right to reduce the number of entries in whatever manner it deems fit.

TRANSFERS

Please ensure exhibits are entered in the correct class at time of entry. No exhibit will be transferred to another class after the closing date of entries.

WITHDRAWALS

All withdrawals must be made in writing and can be sent via email to entries@adelaideshowground.com.au. Emailed withdrawals must include "Withdrawal" in the subject line and the section (eg Technology Section, exhibitor name, class number/s, exhibit number (if known) and exhibit name (if applicable). Withdrawals must be made at least 24 hours prior to judging.

ENTRY REQUIREMENTS

All exhibits must be current work from July 2023 to August 2024.
The support material accompanying each exhibit should be packaged in a suitable A3 or A4 folder, displaying exhibit and class number.

Design brief with projects require:
- A design brief stated clearly
- Independent planning and research evident
- Some innovation and originality
- Communication using graphics
- Good choice of materials and systems of manufacture
- Quality of project showing attention to detail/ performance and safe design
- Attention to safety in manufacture
- Clear use of literacy standards in investigation planning and evaluation stages
- Project only exhibits require:
- Attention to detail
- Quality choice of materials and processes
- Attention to safety in manufacture
- Quality of project showing attention to detail/ performance

Team projects:
- Team projects may be submitted in some Schools categories ONLY and exhibitors appropriately named. Prizes will be awarded to named individuals of the teams with prize cards if they are named at entry/ registration time.

Schools Technology Restriction of entries:
- Exhibitors can enter more than one item for judging.
- Exhibitors may not enter one project across 2 classes or categories.
- If the number of exhibits exceeds the space available, the Society reserves the right to display prize winning exhibits only.

EXHIBIT CARDS

After entries have closed, exhibit cards will be **EMAILED** to exhibitors and must accompany each entry. These cards should be securely fastened to entries so that the card is clearly seen when the work is displayed.
Straight pins must not be used to attach exhibit cards. Every separate article of a set must bear the exhibit number and be attached to the set by mounting.
Exhibits must not have any identification markings or names, other than the exhibit cards supplied by the Society.

PRIZES & AWARDS

The following prizes will be awarded (unless otherwise specified)
First $15 and prize card
Second $5 and prize card
Third: prize Card

Prize Cards:

In addition to the prizes listed, prize cards may be awarded in accordance with the following .

10 to 15 exhibits – One Commended card,

16 to 20 exhibits – Two Commended cards,

Over 20 exhibits – Three Commended cards.

Prize cards not collected will not be forwarded by the Society.

Ribbons & Sashes:

Place Ribbons for Robotics, F1 in Schools and CO_2 Dragster Classes, E Racers and STEMSEL Invention, Innovation and Enterprise.

Champion Sashes for Best Exhibit 2024

The Best Overall Exhibit in Schools Technology

The criteria for Best Design and Technology Exhibit in 2024, judges will be looking for;

- Uniqueness, sensitivity and innovation
- Independent learning and resourcefulness
- A high degree of finish and skills exhibited in the age group
- Attention to safety in manufacture and design
- A clever and marketable product / solution/ or idea.
- High quality of back up material if needed (judges' discretion)
- Eligible entries must receive a first prize, then a special prize for that section to be selected for the Best Design and Technology Exhibit Overall Winner.

PAYMENT OF PRIZE MONEY

All prize money won during the Royal Adelaide Show will be paid by Electronic Funds Transfer (EFT) only.

Prize money will be paid at the end of October.

Any trophy, prize or prize money not claimed by 30 November of the current year, shall be deemed forfeited by the exhibitor and the RA&HS shall no longer be liable to pay or provide the prize.

The Society makes every endeavour to ensure all prizes listed are accurate at the time of printing. Should a prize (cash, voucher, product, trophy) be withdrawn by a sponsor subsequent to printing, the Society will pay prize money as stated above. It is the responsibility of the prize winner to follow-up with the Society any sponsored prize (cash, voucher, product, trophy) they believe they are entitled to prior to 30 November in the year of the prize being awarded. The Society will not follow-up prize sponsors after this date or review any prizes that may have been incorrectly awarded.

Prize money as stated in the Prize Schedule does not include GST.

The prize money which we pay to successful exhibitors depends on information provided to us. If you confirm that you are GST registered and provide your Australian Business Number (ABN), we will pay the appropriate prize money plus 10% GST. We will provide you with a Recipient Created Tax Invoice which you will need to submit to the Australian Taxation Office.

If you confirm you are registered for GST, in entering the competition, you acknowledge your agreement to the following:

You will not issue a tax invoice to the RA&HS in respect to prize money received;

You will notify the RA&HS if you cease to be registered for GST.

If you provide your Australian Business Number but are not registered for GST, we will pay the prize money as detailed in the Prize Schedule without reference to the GST.

If you confirm you are entering as part of a private recreational pursuit or hobby, we will pay the prize money as detailed in the Prize Schedule without reference to GST.

IMPORTANT

It is important that you either:

Confirm you are entering as part of a private recreational pursuit or hobby, or

Confirm you are entering as a GST registered business and supply your ABN

Failure to do either of the above will cause the RA&HS to withhold a portion of your prize money in accordance with Australian tax legislation.

The RA&HS is not a tax consultant and therefore assumes no liability for actions taken as a result of these guidelines. In any instances where an entrant or sponsor is uncertain of the tax implications of their involvement, they should consult their own accountant or tax advisor.

The Society makes every endeavour to ensure all prizes listed are accurate at the time of printing. Should a prize (cash, voucher, product, trophy) be withdrawn by a sponsor subsequent to printing, the Society will pay prize money as stated above. It is the responsibility of the prize winner to follow-up with the Society any sponsored prize (cash, voucher, product, trophy) they believe they are entitled to prior to 11 December in the year of the prize being awarded. The Society will not follow-up prize sponsors after this date or review any prizes that may have been incorrectly awarded

SCHOOLS and ADULT TECHNOLOGY SPECIAL CONDITIONS

Judges Discretion and Removal of Entries:
- Any exhibit may be removed from the display by the judges on behalf of the RA&HS if the exhibit contains:
- Weapons or weapons inferred, intentionally or otherwise.
- Images that are offensive in a sexual, racist or discriminatory manner, intentionally or otherwise.
- Information that is offensive, indiscrete, racist or defamatory, intentionally or otherwise.
- The exhibit may be returned to the owner at a later date, after the Show.

COMPETITION FOCUSES

STEM Focus (Investigation focus on a hobby, career, or a lifestyle)
Manufacturing
- 3D Printing Competition
- Alternative Energies, CO2 Dragsters

STEM Focus – Robotics, Programming, Coding and Gaming
Non STEMSEL Robotics/Control Technologies Platforms (including Artificial Intelligence)
- Individual Entries (Including Education Foundation Prize)
- Team Entries

STEME Focus (Entrepreneurial, enterprising, economics strategy)
Advanced Manufacturing team entries
- F1 in Schools (State Final)
- SUBS in Schools (State Final)

STEMSEL FOCUS Individual Entries
Development classes STEMSEL Robotics/Control Technologies Platforms (including Artificial Intelligence)
- Individual Entries
- Team Entries

STEMSEL FOCUS - Professional classes
"Invention for Social Good"

- Individual Entries Junior (Wizard) Education Foundation
- Team Entries Junior (Wizard teams)
- Individual Adult (Genius)
- Overseas Exchange (Skype Innovators)

Science and Maths Focus (Investigation focus on a hobby, career, or a lifestyle)
Science Investigation Awards (Agriculture and Horticulture Applications)
- Crop Science Investigation
- Experimental Research Techniques

Design & Technology
Individual Entry Focus

- Materials & Construction
- Commercial Modelling Systems
- Graphics & Information Technology
- Schools Photography and Multimedia
- Combinations of Materials & Technologies

Further Information Links
The following links are provided to give a starting point for interested exhibitors looking for further information. As these links are to third party sites the RA&HS do not specifically endorse the information but provide them as a point of reference that can be used in conjunction with other information sources to prepare an entry. Entrants are reminded to correctly reference all websites used in their inventions and innovations.

Alternative Energies
CO2 Dragsters Research Folio ME Program http://www.meprogram.com.au/wp-content/uploads/2012/08/CO2-Dragsters-Research-Folio.pdf

STEM Focus – Robotics, Programming
Non STEMSEL © Robotics/Control Technologies Platforms (including Artificial Intelligence)
LEGO - https://education.lego.com/en-au/curriculum
FIRST Robots - https://firstaustralia.org/programs/first-lego-league/
Arduino - https://core-electronics.com.au/brands/arduino-australia

STEME Focus
Advanced Manufacturing team entries
F1 in Schools Competition (State Final), SUBS in Schools (State Final), 4x4 in Schools (State Final)
Re-Engineering Australia Foundation - https://rea.org.au/

STEMSEL FOCUS
Development classes STEMSEL Robotics/Control Technologies Platforms (including Artificial Intelligence), "Invention for Social Good", STEMSEL Robotics/Control Technologies Platforms (including Artificial Intelligence)
Professional classes

STEMSEL Foundation http://foundation.stemsel.com/
eLabtronics https://www.elabtronics.com/b

Science and Maths Focus
Investigation focus on a hobby, career or a lifestyle
Science Investigation Awards (Agriculture and Horticulture Applications)
Agcommunicators www.agcommunicators.com.au/

Design & Technology
Design and Technology Teachers Association of S.A.Inc. - https://datta.sa.edu.au/

SPECIAL AWARDS

THE DATTA PRIZE BEST EXHIBIT OVERALL IN DESIGN AND TECHNOLOGY
$50 sponsored by Design & Technology Teachers' Association of SA

THE INSPIRING SOUTH AUSTRALIA PRIZE MOST SUCCESSFUL SCHOOL IN TECHNOLOGY
Open to schools and colleges.
Points will be awarded on the following basis:
1st - 3 points
2nd - 2 points
3rd - 1 point
$50 sponsored by Inspiring South Australia

F1 IN SCHOOLS SOUTH AUSTRALIA STATE FINAL

Set up of team Trade Displays will take place on Thursday 29 August 2024 between 8:30 am and 5:00 pm. All displays must be to a Royal Show standard. All exhibits will be displayed and secured before Show week.

Competition and Judging during Show
The competition is promoting engineering including the use of advanced technology systems, culminating in a range of judging including racing of model vehicles.

The competition will comprise of judging across four key areas as follows:
1. Engineering/Scrutineering: Including use of CAD/CAM, CNC manufacturing and compliance with the technical rules.
2. Portfolio & Trade Display: Covering project management, financial and resource management, marketing and team identity. The final design includes research, initial design concepts and development of these through testing and evaluation.
3. Verbal Presentations: Outlining project innovation, collaboration with industry and learning experience.
4. Racing: Including time trials, reaction racing as well as knockout racing.

Competition Days
TRADE DISPLAY SET UP - Thursday 29th August
JUDGING – Monday 2nd and Tuesday 3rd September.
AWARDS PRESENTATION – Tuesday 3rd September

Registration
All registrations must be submitted online through. www.theshow.com.au
Team Entry: $35 per team
Cadet Classes: $15.00 per team
3DP Class: $15:00 per team

Classes of Competition
1. 3DP Class: 1 race vehicle made with 3D Printer and an A2 (or 2 x A3) poster/s of the F1 Design Process. Cars will be scrutineered and raced. This class is open to students in Year 5 to Year 12.
2. Cadet Class - 1 race vehicle made with CNC Machine and an A2 (or 2 x A3) poster/s of the F1 Design Process. Cars will be scrutineered and raced. This class is open to students in Year 5 to Year 12.
3. Development Class - 2 race vehicles, 1 x 7-page Enterprise Portfolio and 1 x 7-page Engineering Portfolio, trade display, verbal presentation, engineering assessment and racing. This class is open to first-time competing students in Years 5 to 9 and has special machining and portfolio restrictions imposed.
4. Junior Professional Class - 2 race vehicles, 1 x 11-page Enterprise Portfolio and 1 x 11-page Engineering Portfolio, trade display, verbal presentation, engineering assessment and racing and folio. This class is open to teams in Years 5 to 9 who have competed previously or do not wish to be imposed with the restrictions placed upon the Development Class.
5. Senior Professional Class - 2 race vehicles, 1 x 11-page Enterprise Portfolio and 1 x 11-page Engineering Portfolio, trade display, verbal presentation, engineering assessment and racing. This class is open to teams in Years 10 to 12, regardless of whether they have competed previously. There are no restrictions imposed.

Submission of Project Elements

Competitors will need to submit the following project elements to REA staff by 12 noon Saturday 31 August at an agreed drop off point.

- 1/2 x identical race cars
- 1 x Hi Res A3 Enterprise Portfolios
- 1 x Hi Res A3 Engineering Portfolios
- 1 x Engineering Compliance Booklet.

All portfolios will NOT be returned to teams until the end of the competition. Students wishing to display portfolios on their trade display or take copies to verbal presentation judging, will need to provide additional copies.

- Electronic submission of all CAD files, renders, portfolios, compliance booklet, media consents, and student code of conduct 2 weeks prior to first day of competition.

All information on F1 in Schools, including current rules and regulations, on the REA website www.rea.org.au/f1-in-schools

Trade Displays

Trade Displays must look professional and be secured for the duration of the Show. The public will be screened off from the display. The public need to see a quality display throughout the Show.

Cadet Teams posters will be mounted on display panels provided for this purpose. All Development, Junior Professional and Senior Professional classes will be provided with an expo style booth with nominal external dimensions of 2 metres long x 1-metre-deep x 2.4 metres high. See current Competition Regulations for building to maximum internal dimensions.

If numbers are excessive and space is limited, teams will rotate days of display. Teams will be advised through the RA&HS and REA.

Awards presented at a closing ceremony will be Royal Show sashes and displayed in the booths.

3DP CLASS JUNIOR

Class 1   3DP Junior Class - Years 5/6/7/8/9
BEST DESIGNED CAR
FASTEST LAP
BEST POSTER

3DP CLASS SENIOR

Class 2   3DP Senior Class - Years 10/11/12
BEST DESIGNED CAR
FASTEST LAP
BEST POSTER

CADET JUNIOR CLASS

Class 3   Cadet Junior Class - Years 5/6/7/8/9
STATE CHAMPIONS
BEST DESIGNED CAR
FASTEST LAP
BEST POSTER

CADET SENIOR CLASS

Class 4   Cadet Senior Class - Years 10/11/12
STATE CHAMPIONS
BEST DESIGNED CAR
FASTEST LAP
BEST POSTER

DEVELOPMENT CLASS

Class 5   Development Class - Years 5/6/7/8/9
STATE CHAMPIONS
2ND PLACE
GRAND PRIX RACE
FASTEST LAP
KNOCKOUT CHAMPIONS
BEST REACTION TIME
BEST ENGINEERED DESIGN
BEST ENGINEERED CAD
BEST MANUFACTURED CAR
BEST TEAM MARKETING
BEST TEAM GRAPHIC DESIGN
BEST TEAM TRADE DISPLAY
BEST TEAM PORTFOLIO
BEST MANAGED ENTERPRISE
OUTSTANDING INDUSTRY COLLABORATION
BEST INNOVATION
BEST TEAM VERBAL PRESENTATION
CHAIR OF JUDGES RECOGNITION OF ACHIEVEMENT

JUNIOR PROFESSIONAL

Class 6   Junior Professional - Years 5/6/7/8/9
STATE CHAMPIONS
2ND PLACE
GRAND PRIX RACE
FASTEST LAP
KNOCKOUT CHAMPIONS
BEST REACTION TIME
BEST ENGINEERED DESIGN
BEST ENGINEERED CAD
BEST MANUFACTURED CAR
BEST TEAM MARKETING
BEST TEAM GRAPHIC DESIGN
BEST TEAM TRADE DISPLAY
BEST TEAM PORTFOLIO
BEST MANAGED ENTERPRISE
OUTSTANDING INDUSTRY COLLABORATION
BEST INNOVATION
BEST TEAM VERBAL PRESENTATION
CHAIR OF JUDGES RECOGNITION OF ACHIEVEMENT

SENIOR PROFESSIONAL

Class 7   Senior Professional - Years 10/11/12
STATE CHAMPIONS
2ND PLACE
GRAND PRIX RACE
FASTEST LAP
KNOCKOUT CHAMPIONS
BEST REACTION TIME
BEST ENGINEERED DESIGN
BEST ENGINEERED CAD
BEST MANUFACTURED CAR
BEST TEAM MARKETING

BEST TEAM GRAPHIC DESIGN
BEST TEAM PORTFOLIO
BEST MANAGED ENTERPRISE
OUTSTANDING INDUSTRY COLLABORATION
BEST INNOVATION
BEST TEAM VERBAL PRESENTATION
CHAIR OF JUDGES RECOGNITION OF ACHIEVEMENT

SUBS IN SCHOOLS SOUTH AUSTRALIA STATE FINAL

Set up of team Trade Displays will take place on Friday 30 August. All displays must be to a Royal Show standard. All exhibits will be displayed and secured during Show week.

COMPETITION AND JUDGING DURING SHOW WEEK
The competition is promoting engineering including the use of advanced technology systems, culminating in a range of judging including the Submarines and ROV's undertaking 'Sea Trials' in a swimming pool located externally to the Showground.

The competition will comprise of judging across four key areas as follows:
1. Engineering/Scrutineering: Including use of CAD/CAM, CNC manufacturing and compliance with the technical rules
2. Portfolio & Trade Display: Covering project management, financial and resource management, marketing and team identity, the final design including research, initial design concepts and development of these through testing and evaluation,
3. Verbal Presentations: Outlining project innovation, collaboration with industry and learning experience
4. Sea Trials: Involving models manoeuvring through an obstacle course underwater within a set timeframe.

COMPETITION DAYS
SEA TRIALS – Wednesday 4th September - at St Peter's College
TRADE DISPLAY SET UP - Friday 30th August
JUDGING – Thursday 5th and Friday 6th September.
AWARDS PRESENTATION - Friday 6th September

SUBS in Schools competition operates at 4 levels. However, Level 1 does not culminate in a competition.

LEVEL 2 – DESIGN AND BUILD AN OPERATING ROV
Students are required to build a large scale ROV which can support ancillary items such as cameras, robot arms and the like and can undertake specific tasks. We have sourced teacher material and texts that will allow students to complete this task. The competition will be based around diving down and recovering items on the floor of a pool along the way filming the activity.

Project Definition
You are a new design company making a bid for the design of a new remotely controlled submersible vehicle. There are special design specifications for this vehicle and parameters you must work within.

To succeed in the challenge, you will need to work with modern design, manufacturing and virtual reality technologies. You will be required to collaborate with industry and these links are a very important part of the challenge marking criteria. The complete design for manufacture process will need to be documented, along with team marketing and promotion. You will also need to form one or more specific industry partnerships to obtain advice or even assistance with manufacturing components not possible within your school.

As in Industry, to design and manufacture your project, you will need to work as part of a team of 3–5 students. Ideally team roles should be allocated to each person. However, you may have to double up on some roles and responsibilities, depending on the team size.

Project Deliverables
The project has five main program deliverables:

Project Portfolio: Create a 7 page Enterprise Portfolio and 7 page Engineering Portfolio (Development Class) or 11 page Enterprise Portfolio and 11 page Engineering Portfolio (Professional Class) covering each of the main elements of the project and examining associated design influences such as: Team roles and duties, the science behind underwater operation, a detailed study of hydrodynamics, the impact of buoyancy, pressure and stability of their design, industry collaboration, The design cycle and Innovation, company Marketing Strategy

Scale Model: Design and manufacture a working scale model of a submersible ROV no longer than 500mm. This vehicle will have to be able to dive, maneuver and carry out a number of tasks within a set of time constraints and will have to meet a number of design limitations set by the rules. It will also have to be remotely operated and be able to communicate with the driver (captain) who will be located on land.

Trade Display: Produce a-Trade Display – usually with nominal external dimensions of 2m (w) x 1m (D) x 2.4m (H) expo type booth aimed at selling your virtual company's products to the Department of Defence. This will include the development of team uniforms.

Verbal Presentation: Prepare a10 minute verbal presentation covering the team's design(s) for presentation to a group of Department of Defence and industry people.

See REA Website for details - http://www.rea.org.au/subs-in-schools/ for current Rules and Regulations

LEVEL 3 - DESIGN AN INTERNAL ACCOMMODATION/KITCHEN GALLEY SPACE

Project Definition: The goal is to form a virtual design company which will make a bid for the design of the accommodation space on-board the Future Submarine Project. To succeed in the challenge, you will need to work with modern design, manufacturing and virtual reality technologies. Just like in Industry, to design and manufacture your project, you will need to work as part of a team of 3–5 students. Ideally, a main team role should be allocated to each person. However, you may have to double up on some roles and responsibilities, depending on the team size.

Project Deliverables: The project has five main program deliverables:

Project Portfolios: Create an 11 page Enterprise Portfolio and 11 page Engineering Portfolio covering each of the main elements of the project and examining associated design influences such as: Human environment design, The impact of buoyancy, pressure, stability and the acoustic signature of their design, Energy generation, usage and storage on board the submarine and propose alternative and innovative energy solutions which could address areas such as, lighting, cooking, food storage etc, Examine key issues associated with sustainability, recycling and handling of human and food waste.

Scale Model: Produce an optional physical 3D model of the design solution at 1/10 scale for their team Trade Display.

Trade Display: Produce a Trade Display – usually with nominal external dimensions of 2m (w) x 1m (D) x 2.4m (H) expo type booth aimed at selling your virtual company's products to the Department of Defence. This will include the development of team uniforms.

Virtual Model: Produce a Virtual 3D model of this operational space using gaming technology which could be used for training submariners.

Verbal Presentation: Prepare a 10 minute verbal presentation covering the team's design(s) for presentation to a body of suitable qualified Managers, Engineers and Scientists from the DMO and Future Submarine Integrated Product Team.

See REA Website for details - http://www.rea.org.au for current Rules and Regulations

LEVEL 4 – DESIGN AND BUILD A WORKING MODEL SUBMARINE

PROJECT DEFINITION
You are a new design company making a bid for the design of a new remotely controlled submersible vehicle. There are special design specifications for this vehicle and parameters you must work within. To succeed in the challenge, you will need to work

with modern design, manufacturing and virtual reality technologies. You will be required to collaborate with industry and these links are a very important part of the challenge marking criteria. The complete design for manufacture process will need to be documented, along with team marketing and promotion. You will also need to form one or more specific industry partnerships to obtain advice or even assistance with manufacturing components not possible within your school. As in Industry, to design and manufacture your project, you will need to work as part of a team of 3–5 students. Ideally team roles should be allocated to each person. However, you may have to double up on some roles and responsibilities, depending on the team size.

PROJECT DELIVERABLES
The project has five main program deliverables:

Project Portfolio: Create an 11 page Enterprise Portfolio and 11 page Engineering Portfolio covering each of the main elements of the project and examining associated design influences such as: Team roles and duties, The science behind underwater operation, A detailed study of hydrodynamics, The impact of buoyancy, pressure and stability of their design, Industry collaboration, The design cycle and Innovation, Company Marketing Strategy

Scale Model: Design and manufacture a working scale model of a submarine/submersible no longer than 1 metre. This vehicle will have to be able to dive, maneuver and carry out a number of tasks within a set of time constraints and will have to meet a number of design limitations set by the rules. It will also have to be remotely operated and be able to communicate with the driver (captain) who will be located on land.

Trade Display: Produce a Trade Display – usually with nominal external dimensions of 2m (w) x 1m (D) x 2.4m (H) expo type booth aimed at selling your virtual company's products to the Department of Defence. This will include the development of team uniforms.

Verbal Presentation: Prepare a 10-minute verbal presentation covering the team's design(s) for presentation to a group of Department of Defence and industry people.
See REA Website for details - http://www.rea.org.au/subs-in-schools/ for current Rules and Regulations

DISPLAYS and AWARDS
Displays must look professional and be secured for the duration of the show. The public will be screened off from the display. The public need to see a quality display throughout show week.

Awards presented at a closing ceremony will be Royal Show sashes and displayed in the booths.

ROV DEVELOPMENT

Class 8   ROV Development - Years 5/6/7/8/9
First, Second, Third

THE 4WD & ADVENTURE SHOW PRIZE BEST TRIAL
$100 sponsored by Automotive Exhibitors Association
BEST ENGINEERED
BEST ENGINEERED CAD
BEST MANUFACTURED ROV

ROV PROFESSIONAL

Class 9   ROV Professional Class - Years 10/11/12
First, Second, Third

THE INSPIRING SOUTH AUSTRALIA PRIZE STATE CHAMPIONS
$50 sponsored by Inspiring South Australia
BEST TRIAL
BEST ENGINEERED
BEST ENGINEERED CAD
BEST MANUFACTURED ROV

Class 10   SPATIAL DESIGN - Years 7/8/9/10/11/12
        First, Second, Third

THE 4WD & ADVENTURE SHOW PRIZE STATE CHAMPIONS
$100 sponsored by Automotive Exhibitors Association

BEST VIRTUAL 3D MODELLING

SUBMARINE

Class 11   SUBMARINE - Years 8/9/10/11/12

THE 4WD & ADVENTURE SHOW PRIZE STATE CHAMPIONS
$100 sponsored by Automotive Exhibitors Association

BEST ENGINEERED

OVERALL CATEGORY AWARDS
BEST TEAM PORTFOLIO
BEST MANAGED ENTERPRISE
BEST TEAM MARKETING
BEST GRAPHIC DESIGN
BEST TEAM TRADE DISPLAY
MOST OUTSTANDING INDUSTRY COLLABORATION
BEST INNOVATION
BEST TEAM VERBAL PRESENTATION
CHAIR OF JUDGES RECOGNITION OF ACHIEVEMENT

CONTROL TECHNOLOGIES, ROBOTICS, PROGRAMMING & GAMING

This area is devoted to a broad range of Technologies that satisfies the need to improve the quality of life in areas such as -
- Manufacture eg lifting, sorting and moving
- Quality assurance techniques and Work Health and Safety (WHS)
- Detecting and Working in danger
- Domestic applications
- Agricultural Applications (eg seed sowing,)
- Games and Information retrieval systems

Programming and Coding Code of Practice
Some entries may require the use of Artificial Intelligence (Ai) in Coding or programming for intuitive systems of control.
The Artificial Intelligence (Ai system of control) must -
- Generate net benefits for all users that are greater than the costs
- Cause no harm to civilian Ai Systems users by deception or be implemented with negative outcomes
- Comply to standards and regulations of use of Ai, in International, Australian, local, state and territory government obligations and laws
- Ensure that people's private data is protected and kept confidential and that the result cannot cause reputational, psychological, financial, professional or other types of harm to people.
- Be fair to all people, nondiscriminatory against individuals, groups or communities on the basis of sex, religion, age, political views or race.
- Contain data that is free from bias/ skewing or characteristics which may cause algorithms to behave unfairly
- Be transparent and explained to people when an algorithm is being used for its impact and the ability of the interaction of the user AND the Ai system to make decisions

- Be identified as responsible in its application or use and acceptable to people for the impacts (intended or unintended) of the algorithm

The user of the Ai platform and creator of the Control Systems must -
- Stay in control of the program and algorithms or coding
- Abide by the "Code of Ethics of Ai"
- Be responsible and fair in its use
- Communicate effectively to others the impacts of the system

ROBOTICS & CONTROL TECHNOLOGIES

Description and details are available through elabtronics website - http://www.runlinc.com
Judges will be looking for quality and originality with the:
- Design of circuit
- Design of the hardware
- Efficiency of control
- Manufacture of the "components of the circuit and finish of the product"
- Performance
- Sensitivity to STEMSEL and UNESCO priorities in the community

These entries show the STEMSEL Principles of Science, Technology, Engineering, Mathematics, Social Enterprise and Learning to give life to communities. The aim of this competition in its many forms is to work to UNESCO priorities to improve the quality of life and human condition.

Please refer to the inside front cover for Closing Date of Entries, Staging, Judging and Collection times.

All exhibits will be displayed and secured in the **Stirling Angus Pavilion** before Show week.

Special Conditions

- All competitions and judging for this category are performed pre-Show and during Show Week. Competitors will be notified of times and dates. Failure to attend at the notified time may eliminate your entry from being judged or displayed.
- Final projects will be displayed at the end of the competition days in cabinets with prize certificates in the **Stirling Angus Pavilion,** located on the western side of the Showground.
- Some exhibitors may need to compete as a team, if otherwise stated.
- Students will be required to go to the Advanced Technology Pavilion at the allocated times to complete and display their work.

STEMSEL Microcontrollers and Robotics

Competition days and dates for 2024. Competitors will be advised of any changes to times.

Pre-Show Competition dates for 2024:
Science Alive week competitions
- Incubator, Soccer, Line Following and UAV Quadcopter Competitions)
- City and Farms

Finalists will be chosen and nominated by the judges to appear in "Science Alive Week" and then a chosen percentage would be invited by the judges to display and compete during Show week as finalists.
The invited teams to display and compete in Show week are comprised of 4 to 6 team members who can individually respond to questions from the judges around the design cycle in the ACARA Digital and Design and Technology.

5 Representatives of a team will be required to show their work to judges in Science alive then at the Royal Adelaide Show using these titles as roles – (The Design Cycle Approach in Digital and Design and Technology)

17

- The Design Brief and Investigation Stage.
- The Devising/ Generating Stage.
- The Implementing/ Production Stage.
- The Evaluation Stages.

The exhibitors will be required to demonstrate their programming skills to the judges and public to obtain their ranking of prizes.

Finalists days for individuals and groups in Show week
Monday 2 September
Tuesday 3 September
Wednesday 4 September
Thursday 5 September
Friday 6 September
Prize award ceremony - Friday 6 September

STEMSEL Inventors Competition and Exhibits
Assembly of the finalists for team and individual exhibits will occur on Thursday 5 August for
- Group Competitions Innovation Invention and Enterprise
- Innovation Invention and Enterprise
- and exhibitors

Demonstrations and interactive exhibits including Innovation Invention and Enterprise exhibits will occur throughout the Show week.

Materials, programs hardware and software
You will need to provide your project with software packages from eLabtronics, ADELAIDE.
You will need to bring a laptop computer (240V, AC Supplied) a program prepared and the performing, working model.
Description and details will be supplied through – STEMSEL runlinc web site http://www.runlinc.com

GAMING & CODING

This section is devoted to the people who invent games and software to tell a story or produce a game for others to learn about information. The information may be of use, as entertainment and educational, to others, for learning such as -
- Historical.
- Geographical.
- Agricultural.
- Science and Mathematics.
- General knowledge and language applications.

The judges will be looking for some reasons for your clever invention of the game and the use of software applications. Some applications could be web based such as "Scratch". This exhibit may be done and shown with a computer on the day of judging, with some background information in a folio to the judges. Information to include in your folio includes:
- A design brief or reasons why this was done.
- Investigation of the gaming systems used.
- A Graphical outline of the package with screen shots describing the data used.
- The production of the game as the key feature of the entry.
- An evaluation of the Gaming package and what could be improved.

The entry must deliver an easy package for the judges to see on screen, the use of the software and the entertainment value with clear graphics.

Class 12   Up to and including Year 8

Class 13   Year 9 - 12

THE INSPIRING SOUTH AUSTRALIA PRIZE BEST EXHIBIT IN GAMING & ENTERTAINMENT
$50 sponsored by Inspiring South Australia

CONTROL TECHNOLOGIES & PROGRAMMING

This section may use Control technologies other than STEMSEL such as Arduino, LEGO Mindstorms and others.

The STEM Robotics/Control Technologies Platforms (including Artificial Intelligence) may be
- Individual Entries
- Team Entries

Judges will be looking for quality and originality with the:
- Design of circuit.
- Design of the hardware.
- Efficiency of control.
- Manufacture of the "components of the circuit and finish of the product".
- Performance.
- Sensitivity to the wellbeing of the community.

With judging consideration given to:
- Design efficiency of chassis and programming efficiency of the system.
- Circuit design and construction and manufacture of the structure supporting the control centre.
- Neatness and finish of the product.
- Weight (lightness) if required and stability of structure that is performing the task.
- Efficiency of control system when tested and under a load.
- NB - A small item may need to be provided to show the Control Technology or Robot working under load conditions.

The Folio of Work must incorporate:
- Details on the design process with design brief, investigation planning and evaluation.
- Back up work with calculations and specific principles used.
- Sustainability of control system or production system.
- Chassis and circuit designs.
- Method of manufacture with pictures of stages

Class 14   Up to and including Year 8

Class 15   Year 9 – 12

UAV (UNMANNED, AERIAL VEHICLE)

Using Control circuits and Programming

Special Conditions
This competition will be held during show week.
For information for further specifications and judging requirements email Miro miro@elabtronics.com or the website www.runlinc.com

Class 16   Up to and including Year 8

Class 17   Years 9 - 12

BEST EXHIBIT IN CONTROL TECHNOLOGIES (UNMANNED AERIAL VEHICLE)

ROBOTICS - Line Following

Robots designed with software and hardware from eLabtronics, are to compete with each other to follow a line on a field. The racetrack is a black paper sheet mat with a white line twisting and turning from start to finish. The track has simple and more complex turns. The robots should sense the line and the program be adjusted by the competitor in the Show week. Times are taken for efficiency of the program.

Judges will be looking for originality of design of hardware and efficiency of system of control.

Class 18   Up to and including Year 8

Class 19   Year 9 - 12

BEST EXHIBIT IN CONTROL TECHNOLOGIES (ROBOTICS FOCUS LINE FOLLOWING)

ROBOTIC DRONES - Obstacle Course

Robotic drones designed with software and hardware to complete an obstacle course in as short a time as possible and to place an object in a target area, using a remote control wifi controller device such as a tablet or laptop.

The robots may sense the obstacles, sense the position in the field and be able to be controlled and programmed with a runlinc WiFi program.

Class 20   Up to and including Year 6

Class 21   Year 7

Class 22   Years 8, 9 and 10

Class 23   Years 11,12,13 and VET

BEST EXHIBIT IN CONTROL TECHNOLOGIES

STEMSEL TEAM & INDIVIDUAL INVENTORS COMPETITION

Please refer to the inside front cover for Closing Date of Entries, Staging, Judging and Collection times.

All exhibits will be displayed and secured in the **Technology Pavilion** before Show week.

Australian Entries (Local and Interstate Entries) and Guest overseas Entries
Both competitions require design brief and problem based learning (PBL) that shows back up work and the competitor attending or communicating through SKYPE on the competition day(s).

There are 2 competitions within this category:

• Individual prize winner – a choice of 4 topics
• Group or team prize winner – a choice of 2 topics

The Design Brief Requirements for the 2 STEMSEL Competitions
• Competitors are required to use control circuits and programming for an invention displaying innovation.
• Competitors are required to be creative in this section to demonstrate an idea or model that is marketable as a commercially viable and sensitive product to STEMSEL and UNESCO/ Dr Yunus Vision of 3 zeros (Zero net carbon, zero poverty and zero unemployment).

Performance of Exhibits
The invention and innovation uses the programming of microcontrollers to perform tasks with ezSystem programs.
The invention must have a strong ethics component to improve the human condition or quality of life, with a theme that may be applicable in the local, state or global context.
The competitor(s) must demonstrate and present an exhibit that includes a:

• Enterprise and a marketing strategy
• A folio in the investigation, planning and evaluation stages of the invention
• A working invention with a verbal discussion.

Judging requirements for both individual and team competitions:

- Competitors will be invited by the Royal Show to attend on judging days to demonstrate and discuss with the judges, their innovative control system.
- The individual or a small group (about 5 people representing a team) will be invited by the Royal Show to display the work, during Show week.
- The invention must be working and have a good standard of display and finish to the public.
- The programs need to be in a PC windows format, readable and based on ezSystem from eLabtronics, Adelaide.
- Both types of competitors must display the invention with a folio as a marketing tool of back up work that shows;
    - title page with the exhibit number, class number and title of the invention
    - design brief
    - description of the technology systems used
    - investigation and analysis of materials (traditional and advanced)
    - investigation and analysis of systems used to manufacture and control the invention
    - showing ideas and final stages of concepts realisation of the innovation
    - print of the control program with some photos of construction and final working stages.
    - evaluation describing a vision statement and marketing strategy for your invention and sensitivity to STEMSEL and UNESCO priorities and Dr Yunus Vision of 3 Zeros, with accounting/ enterprise and innovation strategies.

NB - The folio needs to be up to 15 A4 pages long and be presented on the day with the invention.

INDIVIDUAL PRIZE CATEGORIES
The themes for an individual prize (applicable in the local, state, interstate or global/ overseas context are)
- Entertainment and Recreation
- Environment and Energy Applications
- Agriculture and Horticulture Issues
- Industry and Transport Applications

Some topics could include –animatronics, systems reducing CO_2 emissions, waste disposal, water, soil and air conservation, improving productivity from the land, improve quality and quantity control of manufacturing processes, an alarm system, a smart street light, a white goods control system, a model of low energy housing construction, heating, cooling, lighting and water saving system, a light house, a seed sower, etc

FURTHER INFORMATION
Additional information regarding specifications and judging requirements please email Miro - miro@elabtronics.com. or visit the eLabtronics website www.elabtronics.com

ENTERTAINMENT & RECREATION

Class 24   Entertainment and Recreation - Year 6 and above.

THE INSPIRING SOUTH AUSTRALIA PRIZE BEST EXHIBIT IN SCHOOLS STEMSEL - ENTERTAINMENT & RECREATION
$50 sponsored by Inspiring South Australia

ENVIRONMENTAL & ENERGY ISSUES

Class 25   Environment and Energy Issues - Year 6 and above.

THE CITY OF UNLEY PRIZE BEST EXHIBIT IN SCHOOLS STEMSEL - INNOVATION, INVENTION & ENTERPRISE - ENVIRONMENTAL AND ENERGY ISSUES
$150 sponsored by City of Unley, Trophy ($100) sponsored by City of Unley

AGRICULTURAL AND HORTICULTURAL APPLICATIONS

Class 26   Agricultural and Horticultural Applications - Year 6 and above.

THE SHOW SOCIETY FOUNDATION PRIZE BEST EXHIBIT IN SCHOOLS STEMSEL - INNOVATION,INVENTION & ENTERPRISE - AGRICULTURAL AND HORTICULTURAL APPLICATIONS

The individual winner will receive 2 return economy tickets for the winner and an adult to travel to an overseas destination to compete in a STEM Competition.
Voucher ($3,000) sponsored by Show Society Foundation

INDUSTRY & TRANSPORT APPLICATIONS

Class 27   Industry and Transport Applications

THE INSPIRING SOUTH AUSTRALIA PRIZE BEST EXHIBIT IN THE INDIVIDUAL INNOVATION, INVENTION AND ENTERPRISE AWARD IN ROBOTICS COMPETITION - INDUSTRY AND TRANSPORT FOCUS
$50 sponsored by Inspiring South Australia

GENIUS - INVENTION, INNOVATION & ENTERPRISE

Please refer to the inside front cover for Closing Date of Entries, Staging, Judging and Collection times. This competition is design brief and problem based learning (PBL) requiring back up work and the competitor attending the competition day/s. All exhibits will be displayed and secure before Show week.

Competition days and dates for 2024
Finalists days:
Wednesday 4th September - Friday 6th September
Prize award ceremony - Friday 6th September

There is one competition to select an overall individual prize winner from a choice of 4 topics
• Entertainment and Recreation
• Agricultural and Horticultural Applications
• Industrial and Transport Applications
• Environment and Energy

The Design Brief and Folio requirements
• use control circuits and programming for an invention displaying innovation.
• be creative in this section to demonstrate an idea or model that is marketable as a commercially viable product.
• The invention and innovation uses the programming of microcontrollers to perform tasks with ezSystem programs.
• The invention must have a strong ethics component to improve the human condition or quality of life.
• The themes may be applicable in the local, state or global context.
• The competitor(s) must demonstrate and present an exhibit that-
  • demonstrates enterprise and a marketing strategy with a social and ethical emphasis
  • contains a folio in the investigation, planning and evaluation stages of the invention
  • can demonstrate the working invention to judges with a verbal discussion.

Judging requirements for individual adult competitions:
• Competitors will be invited by the Royal Show to attend on judging days to demonstrate and discuss with the judges, their innovative control system.
• The individual or a small group (about 6 people representing a team) will be invited by the Royal Show to display the work.
• The invention must be working and have a good standard of display and finish to the public.
• The programs need to be in a PC windows format, readable and based on ezSystems from eLabtronics, Adelaide.
• Both types of competitors must display the invention with a folio as a marketing tool of back up work that shows –
  • A title page with the exhibit number, class number and title of the invention
  • The design brief
  • A description of the technology systems used
  • The investigation and analysis of materials (traditional and advanced)
  • The investigation and analysis of systems used to manufacture and control the invention
  • Graphics showing ideas and final stages of concepts realisation of the innovation
  • A Print of the control program with some photos of construction and final working stages.
  • An evaluation describing a vision statement and marketing strategy for your invention, with a social and ethical emphasis.

NB - The folio needs to about 15 A4 pages long and be presented on the day with the invention.

INDIVIDUAL PRIZE CATEGORIES

The themes for an individual prize (applicable in the local, state or global context are):

• Entertainment and Recreation
• Agricultural and Horticultural Applications
• Industrial and Transport Applications
• Environment Issues and Energy

Some topics could include –animatronics, systems reducing CO_2 emissions, waste disposal, water, soil and air conservation, improving productivity from the land, improve quality and quantity control of manufacturing processes, an alarm system, a smart street light, a white goods control system, a model of low energy housing construction, heating, cooling, lighting and water saving system, a light house, a seed sower, etc.

Class 28   Entertainment and Recreation

Class 29   Agricultural and Horticultural Applications

Class 30   Industrial and Transport Applications

Class 31   Environment Issues and Energy

THE INSPIRING SOUTH AUSTRALIA PRIZE BEST EXHIBIT IN INNOVATION, INVENTION AND ENTERPRISE ROBOTICS COMPETITION MADE BY AN ADULT
$50 sponsored by Inspiring South Australia

JUNIOR WIZARD - INNOVATION, INVENTION & ENTERPRISE

These entries show the STEMSEL Principles of Science, Technology, Engineering, Mathematics, Social Enterprise and Learning to give life to communities. The aim of this competition in its many forms is to work to UNESCO priorities to improve the quality of life and human condition. It also encourages the "Invention for Social good" to use the Professor Yunus 3 Zeros policy to create No Unemployment, No Poverty and No nett carbon (Pollution)

Please refer to the inside front cover for Closing Date of Entries, Staging, Judging and Collection times.

All exhibits will be displayed and secured in the **Stirling Angus Pavilion** before Show week.

Special Conditions
• All competitions and judging in this category are performed pre-Show and during Show Week. Competitors will be notified of times and dates. Failure to do so may eliminate your entry from being judged or displayed.
• Students will be required to go to the Advanced Technology Pavilion at the allocated times to complete and display their work.
• Final projects will be displayed at the end of the competition days in cabinets with prize certificates in the **Technology Pavilion**.
• Some exhibitors may need to compete as a team, if otherwise stated.
• All exhibits will be displayed and secure before Show week.
• This competition is design brief and problem-based learning (PBL) requiring back up work and the competitor attending the competition day/s.

Competition days and dates:
Finalists days:
Thursday 6th September and Friday 8th September
Prize Award Ceremony - Friday 8th September

Please refer to the inside front cover for Closing Date of Entries, Staging, Judging and Collection times.

This competition is design brief and problem based learning (PBL) requiring back up work and the competitor attending the competition day(s).

There is one competition to select an overall individual prize winner from a choice of 5 topics.

23

- **ENTERTAINMENT AND RECREATION**
- **ENVIRONMENT ISSUES**
- **AGRICULTURAL APPLICATIONS**
- **MANUFACTURING AND INDUSTRIAL APPLICATIONS**
- **ENERGY AND TRANSPORT**

The Design Brief and Folio requirements
- Use control circuits and programming for an invention displaying innovation.
- Be creative in this section to demonstrate an idea or model that is marketable as a commercially viable product.
- The invention and innovation uses the programming of microcontrollers to perform tasks with ezSystem programs.
- The invention must have a strong ethics component to improve the human condition or quality of life.
- The themes may be applicable in the local, state or global context.
- The competitor(s) must demonstrate and present an exhibit that:
    - demonstrates enterprise and a marketing strategy with a social and ethical emphasis
    - contains a folio in the investigation, planning and evaluation stages of the invention
    - can demonstrate the working invention to judges with a verbal discussion.

Some topics could include –animatronics, systems reducing CO2 emissions, waste disposal, water, soil and air conservation, improving productivity from the land, improve quality and quantity control of manufacturing processes, an alarm system, a smart street light, a white goods control system, a model of low energy housing construction, heating, cooling, lighting and water saving system, a light house, a seed sower, etc.

Class 32   Entertainment and Recreation

Class 33   Environmental Issues and Agricultural Applications

Class 34   Manufacturing and Industrial Applications

Class 35   Energy and Transport

THE INSPIRING SOUTH AUSTRALIA PRIZE BEST EXHIBIT IN INNOVATION, INVENTION AND ENTERPRISE ROBOTICS COMPETITION MADE BY either A STEMSEL Junior Wizard or Non STEMSEL Robotics Entry, Solving Humanitarian needs and providing well-being to other.
$50 sponsored by Inspiring South Australia

STEMSEL TEAM COMPETITION

The Design Brief for Australian and Overseas Competition teams
Competitors are required to use control circuits and programming for an invention displaying innovation with an idea or model of a sustainable system for either a:
- Smart City or
- Smart Farm

The innovation, invention and enterprise competition models use the programming of microcontrollers to perform tasks with ezSystem programs.

The invention must be active and can be used by the public as an interactive, eye catching display. The team will be required at times to discuss their invention with the public and may be observed by the judges.

The display can be no larger than 1800mm x 1200mm. The Team Competition entries may be selected and displayed at the Royal Show at different times due to limited space. Teams will be advised by The Royal Show and eLabtronics, Adelaide.

The invention may have a solution to some of these problems: traffic control, waste disposal and sanitation, improving productivity, transport and energy, lighting, cooling and heating, generation, communication systems, fresh water and storage, soil erosion.

Judges will be looking for:
An innovative approach with strong ethics and "green approach" to the problem to be solved.

AUSTRALIAN TEAMS: SMART FARM

Class 36   **Up to an including Year 8**

Class 37   **Years 9 to 12**

AUSTRALIAN TEAMS: SMART CITY

Class 38   **Up to and including Year 8**

Class 39   **Years 9 to 12**

OVERSEAS TEAMS: SMART FARM

Class 40   **Up to and including Year 8**

Class 41   **Years 9 to 12**

OVERSEAS TEAMS: SMART CITY

Class 42   **Up to and including Year 8**

Class 43   **Years 9 to 12**

BEST EXHIBIT IN INNOVATION, INVENTION AND ENTERPRISE ROBOTICS COMPETITION MADE BY A SCHOOL GROUP

DESIGN and TECHNOLOGY

This area is devoted to students who use the part of the Design process which is producing and uses STEM in some form, concentrating their energies on quality and refined Technology and Engineering Practices to show an excellent product.

Design brief projects require:
- A design brief stated clearly
- Independent planning and research evident
- Some innovation and originality
- Communication using graphics
- Good choice of materials and systems of manufacture
- Quality of project showing attention to detail/performance
- Attention to safety in manufacture
- Clear use of literacy standards in investigation planning and evaluation stages

Project only exhibits require:
- Attention to detail
- Quality choice of materials and processes
- Attention to safety in manufacture
- Quality of project showing attention to detail/performance
- A solution of worth

The criteria for Best Design and Technology Exhibit in 2024, judges will be looking for:
- Uniqueness, sensitivity and innovation
- Independent learning and resourcefulness
- A high degree of finish and skills exhibited in the age group
- Attention to safety in manufacture
- A clever and marketable product / solution/ or idea.
- High quality of back up material if needed (judges' discretion)

25

Eligible entries must receive a first prize, then a special prize for that section to be selected for the Best Design and Technology Exhibit Overall Winner.

Schools Technology Restriction of entries
• Exhibitors can enter more than one item for judging.
• Exhibitors may not enter one project across 2 classes or categories.
• If the number of exhibits exceeds the space available, the Society reserves the right to display prize winning exhibits only.

CO2 DRAGSTERS

Please refer to the inside front cover for closing date of entries, staging, judging and collection times.

All exhibits will be displayed and secured before Show week.

This competition will comprise of handmade CO_2 Dragsters Competition (Racing Car and novelty themes)

Special Note
The novelty section themes for the handmade CO2 Dragsters may be Warner Bros. or comic strip themes such as the Road runner and Coyote, Tweetie and Sylvester etc.

Public and Racing and demonstrations
ALL Show week

These competitions are for students who are going to exhibit at the Show, during Show week. Racing and demonstrations will take place in the Stirling Angus Pavilion with students allocated specific times to compete and display their work.

Safety requirements and exhibition
All entries in the CO_2 Dragster competition will be scrutineered for safety before racing.

Description and details will be supplied for all competitions in this section
Design specifications for hand-made Dragsters Teachers in schools

CO2 Cartridges will be supplied and sponsored by **DATTA of S.A** for demonstration events and CO2 Dragster Competitions.

CO2 DRAGSTERS COMPETITION

Class 44   Years 8, 9 and 10

Class 45   Years 11, 12 and 13

BEST PRESENTED & DECORATED HANDMADE CO2 DRAGSTERS
FASTEST TIMED HANDMADE CO2 DRAGSTER

HANDMADE CO2 DRAGSTERS - NOVELTY SECTION - VEHICLE/S ONLY
eg Warner Bros theme

Class 46   All Years

BEST PRESENTED & DECORATED HANDMADE CO2 DRAGSTERS (NOVELTY SECTION)
FASTEST TIMED HANDMADE C02 DRAGSTERS (NOVELTY SECTION)

ALTERNATIVE ENERGY SOURCES

This category is looking at using traditional and emerging materials and systems technologies to reduce the amount of CO_2 emissions in the atmosphere but more importantly to prevent the further use of fossil fuels being used. The applications of the inventions and innovation demonstrated in this competition may be used in domestic, industrial or agricultural uses where access to fossil fuels is overpriced and is not sustainable for the future.

Topics could include fixed apparatus such as:
- Photovoltaics
- Bio Chemical cells
- Thermal energy sources
- Wind energy sources

The Folio of Work must incorporate
- Folio (the design process with design brief, investigation planning and evaluation)
- Back up work with calculations and specific principles used.
- Sustainability of energy production system
- Designs of chassis/ structure and circuit designs required
- Method of manufacture with pictures of stages
- PLUS the Alternative energy product on show which works in front of the judges

Other considerations will be
- Design efficiency of chassis/ structure and energy production system
- Circuit design and construction and manufacture of the structure supporting the apparatus
- Neatness and finish of the product
- Weight (lightness) if required and stability of structure
- Efficiency of power source when tested and under a load.

NB - A small item may need to be provided to show the power source working under load conditions

Class 47   Years 6 to 8

Class 48   Year 9 - 12

THE INSPIRING SOUTH AUSTRALIA PRIZE BEST PRESENTED ALTERNATIVE ENERGY SUPPLY SYSTEM
$50 sponsored by Inspiring South Australia

THE INSPIRING SOUTH AUSTRALIA PRIZE MOST EFFICIENT (under load) ALTERNATIVE ENERGY SUPPLY SYSTEM
$50 sponsored by Inspiring South Australia

MATERIALS and CONSTRUCTION TECHNOLOGY

TRADITIONAL MATERIALS

Students are to produce a structure that can withstand a force or load, from wood, metal, straws, pop sticks, cardboard etc.
Here are some examples -
- Bridge
- Crane
- A Tall Building
- A House, general building structures, etc.
- Agricultural and Horticultural Applications

Class 49   Up to an including Year 6

COMMERCIAL MODELING & LEGO SYSTEMS

Students are to explore the use of technology through the ages. Models could be using commercial kits such as LEGO, Knex, Meccano, Fischer Technic etc.

The item(s) on display for this competition must fit into an imaginary box of **maximum sizes 400 mm x 300 mm x 300 mm.** (Otherwise these exhibits may not be displayed.)

Topic ideas include:
• House
• Building
• Transport
• Games, Entertainment
• Models
• Animals
• Agricultural and Horticultural Applications

Class 50   Up to an including Year 6

THE DATTA PRIZE BEST EXHIBIT IN MATERIALS TECHNOLOGY
$50 sponsored by Design & Technology Teachers' Association of SA

INFORMATION TECHNOLOGY - PRIMARY

GRAPHICS AND COMMUNICATION

Students are to design on A3 paper, an important article of technology that is used today.

Topics could include;
• Transport themes (ships, planes, cars, boats)
• Agricultural and Horticultural Applications
• Musical Instruments
• Board Game, etc

Class 51   Up to an including Year 5

Class 52   Year 6

EXPERIMENTAL AND INVESTIGATIONS

Students are to visually express and discuss with some neat writing or word processing, their scientific concepts learnt, investigations and experiments.
Models and writing could include topics such as;
• Cells
• Sound
• Light
• Water
• Animals
• Agricultural and Horticultural Applications
• Space
• A Space Ship
• Solar Heating

Class 53   Up to an including Year 6

BEST EXHIBIT IN INFORMATION TECHNOLOGY

SYSTEMS AND ENERGY TECHNOLOGY - PRIMARY

SYSTEMS AND MECHANISMS

Students are to produce a machine or model of a machine that can be powered by a clever means.
Examples include:
- Rubber Band
- A Falling Weight
- Electrical Supply (Battery or Solar Power)
- Spring (Mouse Trap or Similar)
- Agricultural and Horticultural Applications

Class 54   Up to an including Year 6

ENERGY SOURCES

Students are to produce an energy source or model of an energy source that is environmentally friendly and a clever solution to energy production.

Examples include:
- Windmill
- Agricultural and Horticultural Applications
- Solar Heating
- A Water Saving Project etc

Class 55   Up to an including Year 6

THE DATTA PRIZE BEST EXHIBIT IN SYSTEMS AND ENERGY TECHNOLOGY
$50 sponsored by Design & Technology Teachers' Association of SA

MATERIALS and CONSTRUCTION TECHNOLOGY - SECONDARY

Please refer to the inside front cover for Closing Date of Entries, Staging, Judging and Collection times.
All exhibits will be judged, displayed and secured before Show week.
This area encourages the safe use of a variety of materials to increase comfort, lifestyle and needs in life.
Topics could include;
- Furniture
- Toys
- Containers
- Clamping Devices
- Aesthetic Pieces of Work
- Models for Transport
- Tool Marking and Jigs
- Machines or Parts Thereof
- Boxes CD Racks
- Creative Wood and Metal Turning
- Balancing Toys
- Candle Holders
- Kitchen Utensils

Materials to be used could include
- Wood
- Metal
- Plastics and Other Materials
- Combination of 2 or more Materials
- Commercial Modelling and LEGO Systems

WOOD CONSTRUCTION

(Design process or project only)

Class 56   Years 7 and 8

Class 57   Years 9 and 10

Class 58   Years 11, 12, 13 and VET

THE INSPIRING SOUTH AUSTRALIA PRIZE BEST EXHIBIT IN WOOD MATERIALS TECHNOLOGY
$50 sponsored by Inspiring South Australia

METAL CONSTRUCTION

(Design process or project only)

Class 59   Year 7 and 8

Class 60   Years 9 and 10

Class 61   Years 11, 12, 13 and VET

THE MCKECHNIE PRIZE BEST EXHIBIT IN METALS MATERIALS TECHNOLOGY
$100 sponsored by McKechnie Iron Foundry Pty Ltd

COMBINATION OF MATERIALS CONSTRUCTION

(Design process or project only)

Class 62   Years 7 and 8

Class 63   Years 9 and 10

Class 64   Years 11, 12, 13 and VET

THE DATTA PRIZE BEST EXHIBIT IN COMBINATION OF MATERIALS TECHNOLOGY
$50 sponsored by Design & Technology Teachers' Association of SA

CONSTRUCTION TECHNOLOGY USING AVAILABLE DIGITAL TECHNOLOGIES

Students are to produce a model using technologies such as CAD/CAM, Laser Cutting, 3D Printing, Plasma Cutting.

Class 65   Years 7 and 8

Class 66   Years 9 and 10

Class 67   Years 11, 12, 13 and VET

THE INSPIRING SOUTH AUSTRALIA PRIZE BEST EXHIBIT IN CONSTRUCTION TECHNOLOGY USING AVAILABLE DIGITAL TECHNOLOGIES
$50 sponsored by Inspiring South Australia

COMMERCIAL MODELLING and LEGO SYSTEMS - SECONDARY

Class 68   Years 7 and 8

Class 69   Years 9 and 10

THE INSPIRING SOUTH AUSTRALIA PRIZE BEST EXHIBIT IN COMMERCIAL MODELLING SYSTEMS TECHNOLOGY
$50 sponsored by Inspiring South Australia

INFORMATION TECHNOLOGY - SECONDARY

Class 70   Up to an including Year 9

Class 71   Years 10 to 12

THE DATTA PRIZE BEST EXHIBIT IN TECHNICAL GRAPHICS AND COMPUTER AIDED DESIGN
$50 sponsored by Design & Technology Teachers' Association of SA

COMBINATION OF TECHNOLOGIES & MATERIALS - SECONDARY

This category features the use of Combinations of Technologies and Materials that are considered as advanced but will be displayed in the Goyder Pavilion or Advanced Technology Pavilion at the discretion of the judges. This uses elements of Design Technology and Digital Technology.

Students are required to present an article/s that are manufactured with CADCAM operations of either: Laser cutting or CNC Machining

A full size or scaled 3D Product from a working drawing. If competitors submit a design folio with the project/s, the folio must:
• contain a design brief
• an investigation and identification of the processes used
• the original drawing and not a downloaded copy
• be exhibited with labels on the working model or article and folio

The CADCAM project must not exceed a size greater than 150 mm x 150 mm x 150 mm. However, the CADCAM product and the final project incorporating other materials may be judged and exhibited. For example - the project may be part of a whole group project with different materials eg a propeller of a plane or a fully assembled item which is static or working.

Class 72   Up to an including Year 8

Class 73   Years 9 to 12

THE INSPIRING SOUTH AUSTRALIA PRIZE BEST EXHIBIT IN COMBINATION OF MATERIALS & TECHNOLOGIES CADCAM
$50 sponsored by Inspiring South Australia

STUDENTS WITH ADDITIONAL NEEDS

For Primary and Secondary Students using Construction & Materials Technology. The exhibit/s may be accompanied with some writing or a title of the theme. A combination of materials may be used in a safe manner.

A STRUCTURE

Students are to produce an item of construction technology that is a model of a structure eg a bridge, a house, a scarecrow etc.

Class 74   All Years

FURNITURE AND TOOLS

Students are to produce a timber or metal item of construction technology. This needs to be a useful article. It may be used to store articles, it may be a tool or an item of furniture.

Class 75   All Years

A METHOD OF TRANSPORT

Students are to produce a model of a method of transport technology to be used as a toy.

Class 76   All Years

THE INSPIRING SOUTH AUSTRALIA PRIZE BEST EXHIBIT STUDENTS WITH ADDITIONAL NEEDS
$50 sponsored by Inspiring South Australia

MULTIMEDIA

This area encourages students to show a presentation of computer assisted graphics, using digital photography, imaging, with power point presentation, web page design, etc. This area should reflect the use of emerging technologies in media presentation. There is a need to provide to the public, a description of issues or themes with a possible solution, with higher visual impact.

Special conditions.
• Multimedia applications will need to submit a DVD read only PC format.
• Individual and group work is encouraged. The item must be titled.

Possible themes include:
• Confronting global and local issues, Life at school, At the beach, Life in the city, or the country.
• Entertainment such as - A Musical Presentation, A Comedy Routine, A Drama, A Melodrama
• Community services and advertising, Ceremonies and celebrations etc.

Class 77   Year 8 and above

THE INSPIRING SOUTH AUSTRALIA PRIZE BEST EXHIBIT FOR MULTIMEDIA PRESENTATION
$50 sponsored by Inspiring South Australia

THE INSPIRING SOUTH AUSTRALIA PRIZE BEST OVERALL EXHIBIT IN DESIGN & TECHNOLOGY
$50 sponsored by Inspiring South Australia

3D PRINTING COMPETITION

PRIZES
Prizes will be awarded to the winners of each category.
1st Prize $15, 2nd Prize $5 and 3rd Prize Card.

SASHES

1st, 2nd and 3rd prize winners in each category.

SHOW CONVENOR
Mandi Dimitriadis - mandi@makersempire.com

DELIVERY
3D objects and printed documentation must be delivered to the Showground on Wednesday 21 August 2024 between 9.00 am and 4.00 pm. Please note that all exhibits must have their exhibit card attached and be delivered with the List of Entries slip that will be provided prior to delivery day.

RESTRICTION ON ENTRIES
- This competition is restricted to students in Years 3 -12
- Entry is $5.00 per entry.
- Exhibitors may not submit more than one entry per category.

DISPLAY of PROJECTS
Projects will be displayed during the Show. Where space is limited only prize-winning projects may be displayed.

REGULATIONS
- Use a 3D printer and relevant computer aided design program and any suitable 3D printing material.
- All entries must be original student designs. Adult assistance with the 3D printing of designs is permitted.
- Provide in hard copy a cover sheet with your name, year level, the school you attend and an image of your submission.
- Include a 50–100-word description of your design for junior classes.
- Applicants may submit only one entry per category.
- Objects such as guns or slingshots will not be accepted.

GUIDELINES
- Participation is open to all primary and secondary school students from all sectors (Department for Education, independent and Catholic Schools).
- A panel of independent judges from Education, tertiary and industry will be the final judge.
- The competition is an individual competition - group entries will not be accepted.
- Participants need to supply a 3D Model.
- Entries will be judged based on the 3D model and accompanying descriptions.

PUBLICITY
By entering this competition, entrants agree to the use of winner's name, photographs, and opinions regarding the competition and any other relevant information for purpose of media promotion of the competition.

PRIMARY SCHOOLS

CREATIVE PROJECT
This category asks students to use their imagination to design and 3D print an original creative model or object such as a sculpture, figurine, toy, ornament, or jewelry.
Entries in this category need to include a written description of 50-100 words.

Class 76   Creative Project - Years 3 and 4

Class 77   Creative Project - Years 5 and 6

FUNCTIONAL PROJECT
This category asks students to design and 3D print a functional object such as a tool, gadget or utensil.
Entries in this category need to include a written description of 50-100 words explaining how the object is used.

Class 78   Functional Project - Years 3 and 4

Class 79   Functional Project - Years 5 and 6

SECONDARY SCHOOLS

CATEGORY 1 - SCULPTURE

Design a three-dimensional object that is free standing and no larger than a 200 mm cube. For example, chess piece, figurines etc.

Entries will be judged on:
- Originality
- Degree of Innovation
- 3D printability
- Aesthetic quality
- Quality and clarity of presentation materials

Each participant will supply a **portfolio of work** (in hard copy, not USB) as per the guidelines below to support the design process of their final 3D sculpture.
- Provide a cover sheet with your name, school you attend and an image of your entry.
- Research detailing ideas, sketches and images of at least three possible solutions with notation.
- Final sketched solution with notation
- At least six screen grabs of the CAD Design process with detailed notes.
- Final rendered image prior to 3D printing.
- Evaluation and reflection of the final 3D project.
- 3D printed object.

Class 80   Sculpture - Years 7 and 8

Class 81   Sculpture - Years 9 and 10

Class 82   Sculpture - Years 11 and 12

CATEGORY 2 - FUNCTIONAL OBJECT

Design a functional object that has at least two parts and is no larger than a 200 mm cube. For example, box with lid, hinge, jigsaw, compass etc

Your entry will be judged on:
- Originality: degree of innovation, complexity of the assembled product (if applicable) and how the components/sub-parts connect and/or interact
- 3D printability
- Aesthetic quality
- Quality and clarity of presentation materials

Each participant has to supply a **portfolio of work** (in hard copy, not USB) as per the guidelines below to support the design process of their final 3D object.
- Provide a cover sheet with your name, school you attend and an image of your entry.
- Research detailing ideas, sketches and images of at least three possible solutions with notation
- Final sketched solution with notation
- At least six screen grabs of the CAD Design process with detailed notes.
- Final rendered image prior to 3D printing.
- Evaluation and reflection of the final 3D project.
- 3D printed object.

Class 83   Functional Object - Years 7 and 8

Class 84   Functional Object - Years 9 and 10

Class 85   Functional Object - Years 11 and 12

CATEGORY 3 - OBJECT WITH MOVING PARTS

Design an object that has at least two moving parts that transfers motion. For example, windmill, gears etc.
Your entry will be judged on:

• Originality
• Degree of innovation 'complexity of the moving parts and how the moving parts interact to transfer motion'
• 3D printability
• Aesthetic quality
• Quality and clarity of presentation materials

Object: Each participant has to supply a ***portfolio of work*** (in hard copy, not USB) as per the guidelines below to support the design process of their final 3D object.

• Provide a cover sheet with your name, school you attend and an image of your entry
• Research detailing ideas, sketches and images of at least three possible solutions with notation.
• Final sketched solution with notation.
• At least six screen grabs of the CAD design process with detailed notes.
• Final rendered image prior to 3D printing.
• Evaluation and reflection of the final 3D object.
• 3D printed object.

Class 86   Object with Moving Parts - Years 7 and 8

Class 87   Object with Moving Parts - Years 9 and 10

Class 88   Object with Moving Parts - Years 11 and 12

SPECIAL AWARD

BEST OVERALL EXHIBIT IN 3D PRINTING
Chosen from the first placed entries in classes 80-88

SCIENCE INVESTIGATION AWARDS

CONVENOR
Belinda Cay, AgCommunicators
Belinda.cay@agcommunicators.com.au 8332 3277

Entries must be completed via The Show online registration platform by Friday 16 August 2024. Please liaise with Belinda Cay (Belinda.cay@agcommunicators.com.au) regarding the judging / selection of your finalists.

This competition focuses on experimental design and research methodology and incorporates the use of STEM to describe and solve problems. It requires students to use logical scientific investigation techniques. Entrants can select any topic of interest to them, however, there is a specific award for projects with a Food and Fibre (agricultural) theme.

Judges will be looking for

• Unique research topic
• Clear, concise hypothesis and the establishment of a robust experimental design
• Defined dependent and independent variables, controls, replications
• Defined methodology and results, with a discussion providing ideas and recommendations
• Unique and exceptional high quality of work
• Strong ethical approach to improve the quality of human life or condition
• Consideration of appropriate work health and safety and personal protective equipment
• Understanding of rural problems and solving these in a unique manner
• Positive interaction with the judges and public

What is it?
The Science Investigation Awards is an investigation-based school science competition.

Why should you enter?

The Science Investigation Award is a great way to do some real-life science. You'll gain valuable skills, solve problems, work with other students, meet new people, learn a lot and maybe even win some cash prizes!

What do you have to do?

Each entry (individual or team of no more than TWO) has to pose a question as a hypothesis and then plan and complete a scientific investigation to help answer that question. The project then has to be written up as a scientific report and displayed as a poster. The posters will be judges by industry scientists at the Awards Day.

Help

We can come to your school and help with the investigations, please contact the Convenor (see below).

Entry

Schools need to register in the Science Investigation Awards. Entire are done online by visiting www.theshow.com.au/technolog

Investigation

Students complete their investigation in their own or school time. Teachers are encouraged to provide support and direction and students may also enlist other people as scientific mentors. A booklet is provided to help guide students through the experimental design process.

Report & Display

The final poster or report presentation needs to be submitted on the day of judging (Monday 2 September). Students must bring their poster, and any supporting information i.e. their report, on the day and set up on their allocated table. Correspondence will be provided by the Convenor.

Judging

First round judging will take place at regional judging days in August. The Convener will work with teachers/regional judges to select finalisits from each school. Teachers will then liaise with their students to coordinate their entry and entry tickets. Finalists will be judged at the Royal Adelaide Show by scientists and industry representatives. Finalist students need to be present to interact with the judges.

Exhibits of award recipients will be displayed in the Stirling Angus Pavilion for the duraton of the show

A single day entry ticket to the Royal Adelaide Show will be available to each confirmed finalist and their registered supervising teachers / caregivers (note only one ticket per student caregiver/teacher is available)

Presentation of Prizes

Prizes will be awarded in each category.
Awards will be presented at the Royal Adelaide Show or participating schools on a suitable date.

PRIZES

The following prizes will be awarded to the winners after the judging held at this year's Royal Adelaide Show.

First: Sash and $250
Second: Ribbon and $150
Third: Ribbon and $150
Best Food & Fibre Based Project Primary - Sash and $300
Best Food & Fibre Based Project Middle - Sash and $300

All entrants will receive Certificate of Participation.

DELIVERY & REMOVAL OF EXHIBITS

All finalist exhibits are to be brought to the Show on the day of judging. Students will be able to set up their posters in the Goyder Mezzanine between 9am - 10.15am. Students must remain with their posters for judging.

All exhibits can be taken by entrants at the conclusion of the presentations, with the exception of those which received awards. Exhibits of award recipients will be displayed in the Stirling Angus Pavilion for the duraton of the show. Those posters displayed must be collected on Tuesday 10 September. Please see the front of this schedule for specific dates and times.

FINAL JUDGING DAY PROGRAM HELD AT THE ADELAIDE SHOWGROUND
Monday 2 September 2024

9.00am - 10.15am	Delivery and set up of entries
10.30m	Opening ceremony
11.00am	Judging commences
12.30pm	Awards presentation
1.00pm	Completion and student departure

PHOTOGRAPHY
Teachers will be provided with a talent release form and will be required to bring these on the day. Photos will be taken by AgCommunicators by permission.

RESTRICTION OF ENTRIES
• This competition is restricted to any student in year 5 -9 from any school in South Australia.
• Entries are restricted to a maximum of 15 entries per school.
• Primary and middle students may complete their projects individually or in pairs.
• Exhibitors may not submit more than one entry in any one class.
• Due to limited space available for this competition only a selection of award winners will be displayed during the Royal Adelaide Show following finals day.

SCIENCE INVESTIGATION AWARDS CLASSES

Class 77   THE SHOW SOCIETY FOUNDATION PRIZE Year 4
First : $250; Second : $150; Third : $100
$500 Sponsored by Show Society Foundation

Class 71   THE SHOW SOCIETY FOUNDATION PRIZE Year 5
First : $250; Second : $150; Third : $100
$500 Sponsored by Show Society Foundation

Class 72   THE SHOW SOCIETY FOUNDATION PRIZE Years 6
First : $250; Second : $150; Third : $100
$500 Sponsored by Show Society Foundation

Class 73   THE SHOW SOCIETY FOUNDATION PRIZE Year 7
First : $250; Second : $150; Third : $100
$500 Sponsored by Show Society Foundation

Class 74   THE SHOW SOCIETY FOUNDATION PRIZE Year 8
First : $250; Second : $150; Third : $100
$500 Sponsored by Show Society Foundation

Class 75   THE SHOW SOCIETY FOUNDATION PRIZE Year 9
First : $250; Second : $150; Third : $100
$500 Sponsored by Show Society Foundation

THE SHOW SOCIETY FOUNDATION PRIZE BEST FOOD & FIBRE PROJECT - YEAR 4/5
$300 sponsored by Show Society Foundation

THE SHOW SOCIETY FOUNDATION PRIZE BEST FOOD & FIBRE PROJECT - YEAR 6/7
$300 sponsored by Show Society Foundation

THE SHOW SOCIETY FOUNDATION PRIZE BEST FOOD & FIBRE PROJECT - YEAR 8/9

$300 sponsored by Show Society Foundation

ROYAL ADELAIDE SHOW

Automotive Exhibitors Association

City of Unley

Design & Technology Teachers' Association of SA

eLabtronics

Inspiring South Australia

McKechnie Iron Foundry Pty Ltd

I SPONSOR A
Royal Adelaide Show
PRIZE

YOU CAN TOO!
STARTING FROM $50.

To find out more please contact:
Karen Holthouse, Sponsorship Manager
sponsorship@adelaideshowground.com.au
Ph: 08 8210 5211 or visit theshow.com.au

ROYAL ADELAIDE SHOW - EXHIBITORS CONDITIONS OF ENTRY

HAZARD REPORTING

Exhibitors must notify the Area/Pavilion Supervisor or the Venue Control Centre immediately of any hazards detected. Hazards are any situation which has the potential to cause:

1. Injury, illness or death to people or animals either immediately or in the future

2. Damage or destruction to property

INCIDENT REPORTING

Exhibitors must notify the Area/Pavilion Supervisor or the Venue Management Office immediately an incident occurs which has resulted in:

1. The injury, illness or death of any person or animal

2. The damage, destruction or loss of property

3. A near miss incident that could have resulted in the consequences listed in 1 and 2

WASTE DISPOSAL

All waste including liquids must be disposed of responsibly and placed in the appropriate bin or receptacle. Storm drains must not be used for the disposal of any waste.

HAZARD MINIMISATION

All areas must be kept in a clean and tidy order with clearly defined and available access and exit routes at all times. Build-up of combustible waste must be avoided.

Care must be taken to minimise trip hazards and obstacles that people may walk into.

HAZARDOUS MATERIALS

The RA&HS are to be advised of all hazardous materials that are brought onto the Showground. Appropriate warning signs and Safety Data Sheets (SDS) will need to be provided before allowing these materials on site. SDS are to be available onsite and provided immediately upon request by an RA&HS Representative.

MEDIA COMMENTS

Any public comment on emergencies, incidents or other venue matters should only come from the RA&HS. The key media spokesperson for the RA&HS is the Marketing Manager.

DUTY OF CARE

It is important to ensure your own safety and that of all other site personnel, visitors and general public at the Adelaide Showground.

All competitors have a "Duty of Care" to avoid exposing themselves or other people to situations which could lead to injury. This "Duty of Care" extends to the prevention of damage to property.

LIABILITY AND INDEMNITY

1. Release

- Entry to and remaining on the Showground is entirely at the risk of the Exhibitor and to the maximum extent permitted by law, the Exhibitor releases the Society (which term includes in this clause the Society's officers, employees, members and agents), from all claims and demands of every kind resulting from any accident, damage or injury occurring at the Showground, and without limitation, the Exhibitor acknowledges:

- the Society has no responsibility or liability for any loss, damage or injury to or caused by any Exhibit;

- the Society has no responsibility or liability for any loss, damage or injury to or caused by any Exhibitor, his or her family, invitees and Agents;

- the Society has no responsibility or liability for any loss, damage or injury to a Motor Vehicle or any of its contents whilst it is located on the Showground; and

- without limiting Regulations 1 (a) and 1 (b) above, the Society has no responsibility or liability for any loss, damage or injury resulting from the sale, treatment, failure to treat, destruction, disposal or other dealing with any Exhibit, or for loss, damage or injury to any personal belongings, equipment or property brought onto the Showground.

2. Indemnity

To the maximum extent permitted by law, the Exhibitor must indemnify and keep indemnified the Society and its officers, employees, members and agents from and against all actions, claims, demands, losses, damages, costs, expenses and liabilities including without limitation, consequential loss and loss of profits for which the Society is or may be or become liable in respect of or arising from:

a) loss, damage or injury to any person in connection with the Exhibit or the relevant Event;

b) without limiting Regulation 2(a), loss, damage or injury to any other Exhibit or Exhibitor, his or her family, invitees, Agents, or to the property of the Society, or its members, or to the general public, caused or contributed to or by any act or omission of an Exhibit of the Exhibitor or by the Exhibitor, his or her family, invitees or Agents; and

c) without limiting Regulation 2(a), loss, damage or injury to the Exhibit, or the Exhibitor, his or her family, invitees, or Agents caused or contributed by an act or omission of an Exhibit of the Exhibitor or by the transportation, feeding or housing of an Exhibit of the Exhibitor.

3. Removal from Showground

Without prejudice to any other provision in these Regulations, where the Society, its officers, employees, members or agents removes an Exhibit, or causes an Exhibit to be removed from the Showground, the Exhibit is removed or caused to be removed entirely at the risk of the Exhibitor. The person or persons removing the Exhibit will be deemed to be the agent of the Exhibitor, and his or her acts and omissions will be deemed to be the acts and omissions of the Exhibitor.

4. Insurance

The Society will arrange Animal Exhibitors Public Liability insurance cover for all Exhibitors of Exhibits being animals. The Exhibitor is bound by the terms and conditions of this insurance and by Statutory Duties as defined under the Insurance Contracts Act (1984). Details of the Animal Exhibitors Public Liability insurance are set out in the Relevant Schedule. The Society does not insure first party loss, damage or injury to Exhibits, and Exhibitors should consider purchasing insurance if required.

5. Personal effects

The Society has no responsibility or liability for any loss or damage caused to personal belongings, equipment or property which is brought onto the Showground by an Exhibitor, his or her family, invitees or Agents.

EMERGENCY INFORMATION

Emergency information and Emergency Assembly Points for the various animal pavilions and stables will be included with Exhibitor List of Entries and Notice to Exhibitor notifications. Competitors should be familiar with these plans.

FIRST AID

During the Royal Adelaide Show, St John provides First Aid Services but it is suggested that competitors have a basic First Aid kit for minor medical requirements.

St John is not in attendance after public hours.

For emergency contact details, check Notice Boards for onsite assistance or dial 000 for a medical emergency.

RA&HS EMERGENCY FACILITIES

Firefighting and other emergency equipment must not be removed or used for any other purpose. Missing or unserviceable equipment should be reported to the Venue Control Centre immediately.

SMOKING

Smoking is only permitted in designated locations. The Royal Adelaide Show is a smoke free event.

TRAFFIC CONTROL

The RA&HS Traffic Control Policy imposes speed restrictions within the Showground. For the duration of the Royal Adelaide Show the speed limit is 10 kph on the grounds and 8 kph inside buildings.

The use of vehicles inside the Showground is closely managed during the Royal Adelaide Show. Conditions of entry will be provided with the issue of Vehicle Entry Permits.

ROYAL ADELAIDE SHOW