



PROSPER COFFS HARBOUR
2020 Young Inventors Solar
Challenge
Event Information & Entry Form
2 SEPTEMBER 2020



THE CHALLENGE

Planet Earth is facing an environmental crisis with the demand for energy outpacing the supply at an alarming rate. Humans continue to consume the Earth's resources in ways that accelerate carbon emissions, global warming and harmful climate change.

Prosper Coffs Harbour Limited (PCH Ltd) *, believes that young people can help address this potential environmental crisis. As a result, we are introducing the 2020 Young Inventors Solar Challenge.

The Challenge was developed to have students design and build their own solar-powered invention that has practical application and fulfills a need within society. It will provide a hands-on learning opportunity that combines science, technology, engineering and math's as well as creativity and manual dexterity. Participants will attain a greater knowledge of solar cells, motors, gears, electricity and the power of the sun.

*Prosper Coffs Harbour Limited (PCH Ltd) is a not-for-profit company established to administer three charitable trusts, whose core objective is to develop a secure source of funds for important infrastructure in the Coffs Harbour local government area.

HOW TO GET INVOLVED

Getting involved in the 2020 Young Inventors Solar Challenge is easy. The challenge is open to both Primary and Secondary School students from years 5 - 10 and entry is free!

There will be two categories on the day, Blue category years 5-6 and Red Category years 7- 10. Teams can be made up of 2-5 students, with a maximum of 2 teams entered per school. PCH Ltd will support each team with \$50 to go towards the creation of their invention.

To enter please fill out the entry form on page 7 of this document and send back to Prosper either via post or email by **Monday 2nd March 2020**. On receipt of your completed entry form, PCH Ltd will direct deposit the allocated funds into the school's nominated bank account.

Prosper Coffs Harbour

Postal Address: PO BOX 858, Coffs Harbour, NSW 2450

Email Address: admin@prospercoffs.org.au

EVENT DATE AND LOCATION

The 2020 Young Inventors Solar Challenge will be held on **Wednesday 2nd September 2020** from 10am- 2pm at Coffs Harbour Showground Exhibition Pavilion, 123 Pacific Highway, Coffs Harbour, NSW 2450. The challenge will be judged by a panel which will consist of the Prosper Coffs Harbour Environmental Committee Members, industry specialists and volunteers.

The inventions will be set up on tables on the grassed area outside the venue and the registration and awards presentation will be held inside the Exhibition Pavilion. Tables will be supplied for each invention.

Parking will be available at the venue for school buses. Upon receipt of your entry form a map of the event layout will be sent through outlining the designated area for parking.

TIMETABLE

All teams should arrive in time for an official start at 10am. The day begins with registration and time to set up your inventions. We will then have a special guest speaker and interactive workshop for students. A basic schedule for the day's activities is outlined below:

10:00am- Registration and set up

11:00am- Special guest speaker and workshop

11:30am- Judging of inventions

12:00pm- Lunch

1:00pm- Awards and presentation

Times may vary somewhat depending on final numbers, weather conditions and the event format, but every attempt will be made to finish by 2:00pm.

AWARDS AND PRIZES

Awards will be presented to place getters in each discretionary category. The prizes will include solar powered education books for the school.

LUNCH

Students will be required to bring their own lunch and water. There will be afternoon tea provided and extra water on the day for any students who forget to bring along their own.

AMENITIES

Coffs Harbour Showground Exhibition Pavilion has their own toilet block for students. On the day of the challenge event students are encouraged to bring along their own drink bottle, hat, sunscreen, and some warm clothes to cater for Coffs Harbour's variable weather.

ADVERSE WEATHER

Most solar powered inventions can run in virtually any weather, even in very overcast conditions, so don't bank on a bright and sunny day. For everyone to enjoy a great day out, a backup date of Wednesday 9th September (the following Wednesday) has however been put in place in case of rain and/or strong winds. Schools are advised to closely monitor their emails and the Prosper Coffs Harbour website/Facebook page should there be a cancellation. A decision on this will be made approximately 24 hours out from the challenge event.

MEDIA PERMISSIONS

Photographs and videos will be taken on the day of the challenge event. If you have any students who wish to not be included please advise Prosper Coffs Harbour when you submit your entry form to admin@prospercoffs.org.au.

CHALLENGE GUIDELINES

1. Students entered must be enrolled in the 2020 school year.
2. Teams can be made up of 2-5 students. Only 2 teams can be entered per school.
3. The allocation of funds from PCH Ltd will be direct deposited into the schools nominated account. Once received the distribution of these funds will be at the discretion of the school and/or class teacher.
4. A project outline with a detailed budget must be sent to PCH Ltd by **Wednesday 19 August 2020**. The project must utilise the funds provided (\$50) by PCH Ltd. Entries which exceed the budget will be ineligible for the competition. Please use the project outline on page 8 - 9 of this document.
5. Teams entered into the challenge must be able to explain and demonstrate how their project works at the judging ceremony on the day of the challenge event.

JUDGING CRITERIA

The inventions will be judged using the following criteria:

1. Practicality and usefulness of the product (20 points).
2. Originality and creativity of the product (10 points).
3. Technical or graphic design of the product (10 points).
4. Ability to comply with budget requirements (5 points).
5. Complying with basic safety requirements (5 points).

Total Marks Available = 50

Key Features

Practicality / Usefulness – 20 Points	
<ul style="list-style-type: none">o The products use and need is easy to understand and displays some degree of practicality or need within society.	
Yes: <input type="radio"/>	No: <input type="radio"/>
Originality / Creativity – 10 Points	
<ul style="list-style-type: none">o The product design demonstrates a level of creativity and / or aspects of originality.	
Yes: <input type="radio"/>	No: <input type="radio"/>
Graphic / Technical Design – 10 Points	
<ul style="list-style-type: none">o There are obvious inspired design ideas in regards to appearance and use.o The project outline information is an organised, clear & concise format.	
Yes: <input type="radio"/>	No: <input type="radio"/>

Budget – 5 Points	
<ul style="list-style-type: none"> ○ There is written evidence of compliance to set budget. 	
Yes: <input type="radio"/>	No: <input type="radio"/>
Safety Requirements – 5 Points	
<ul style="list-style-type: none"> ○ The product design and operation has a high level of safety requirements. 	
Yes: <input type="radio"/>	No: <input type="radio"/>

EDUCATIONAL OUTCOMES

It is important that any project involving school students has some relevance to the Australian School curriculum. In developing the 2020 Young Inventors Solar Challenge, PCH Ltd, has endeavored to correlate the practical activities associated with the challenge to educational outcome requirements in the Science and Design & Technology study areas.

Course Description

Technology develops in students an understanding of design and design processes and the technologies that can be employed to produce creative and innovative solutions to identified needs. It enables students to select and use materials, tools and techniques in a responsible and safe manner.

What will students learn to do?

Students will learn to identify and respond to needs through the development and production of quality design projects. They will learn to access and safely use a range of materials, tools and techniques to aid in the development of design projects and to critically evaluate their own work and the work of others.

Students will learn to undertake research and experiments to inform the development of design projects and to evaluate, analyse and apply the results of these activities to individual projects.

ENTRY FORM

An entry form must be completed for each team entered into the challenge. The completed form must be returned to PCH Ltd by **Monday 2nd March 2020**. There are only 2 teams that can be entered per school with 2 -5 students per team. Please fill out a separate form for each team.

School Name:		
Team Name:		
Number of students in the team:		
Subject Area:		
Year Group:		
Supervising Teacher's Contact Details:	Phone:	
	Email:	
Schools Bank Account Details	Bank Name:	
	BSB Number:	
	Account Number:	

We agree to abide by the Challenge Guidelines.

Supervising Teacher's Name: _____

Supervising Teachers Signature: _____

PROJECT OUTLINE

All teams entering the 2020 Young Inventors Challenge must submit a completed project outline by **Wednesday 19th August 2020** to PCH Ltd. Information contained in the project outline will be used in the assessment and judging of the invention. If more space is required, please attach additional pages.

Project Name:	
Main use of device:	
Other possible uses:	1.
	2.
	3.
How is solar technology utilised:	
How does the device work:	
Who will use the device:	

Project Budget

Materials Purchased for the Project	Cost
1.	\$
2.	\$
3.	\$
4.	\$
5.	\$
Materials Supplied by School	
1.	
2.	
3.	
4.	

Please forward your completed entry form and project outline by 19 August 2020 to:

Mrs. Melissa Nunn
 Prosper Coffs Harbour Limited
 PO BOX 858
 Coffs Harbour NSW 2450
 Email. admin@prospercoffs.org.au
 Phone. 0437 767 451