HILLS
ADVENTIST COLLEGE

Science Fair Guide 2026

for K - 6 Students & their Family

Enter through the correct Forms address by April 21st.

Castle Hill campus: Family Science Fair 2026 at Castle Hill – Fill out form

Kellyville campus: Family Science Fair 2026 at Kellyville – Fill out form

Hand in projects according to directions given on your campus.

Term 2 Week 2 – Tuesday, 28th April

Hills Adventist College is keen to provide our budding scientists with a venue to showcase their research, organisation, perception, application and evaluation skills. The College acknowledges that the support and encouragement of family is often the spark for children's desire to seek out new knowledge, attitudes and skills.

Ask a question. Where will it take you?

To Begin

1. Choose a category of interest.

Earth and the Universe

Alive

Cycles and Change

Movement and Power

This determines the entry category.

2 . Choose an Entry type

(Projects entered as experiments that do not meet the criteria will be judged as reports.)

A Report

- Title that states the guiding question and attractive presentation that shows the theme of the investigation with colour and illustrations.
- Description - explain the guiding question, the subject and parameters of the investigation.
- Discoveries presented with labelled diagrams and/or photographs and/or a model to demonstrate key facts.
- Summary that answers the guiding question and explains impact of discoveries and new questions these raise.
- Bibliography (See appendix for formatting.)

OR

An Experiment

- Title - that states the guiding question.
- Aim – a testable statement which is related to the guiding question.
- Hypothesis -a theory, proposed answer to the question.
- Procedure -what you did to test your hypothesis? What variable(s) are being tested? Include photographs.
- Results -what happened as you tested your hypothesis? Show in labelled graphs or tables. Include photographs or a model or display of materials.
- Conclusion - how do your results prove or disprove the original hypothesis? What further questions are raised?
- Application - what effect does your conclusion have?
- Bibliography (See appendix for formatting)

The Guiding question should focus on a precise idea that will decide the parameters of the report or experiment.
The Guiding Question will be the Title of your entry.

Past Examples of Guiding Questions in each entry Category.

3. Design your Guiding Question

This question will guide your report or experiment design.

4. Create a Progress Calendar

Start from the hand in date and work backwards to ensure you have time to complete your aim.

- List and gather required materials
- Find resources to suit the age and interest of the student(s)
- Plan for student discovery!

Earth and the Universe

Where did the shells in my collection come from?
Why does Earth circle the sun?
What effect could space junk have on our future?
What happens when a new island is made?
Do rocks burn?

Cycles and Change

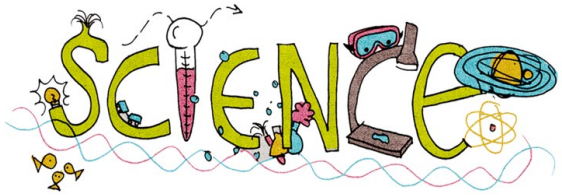
What creatures crawl before they fly?
How do floods help farmers grow more food?
What chemical reactions change bananas to muffins?
What laundry product removes stains best?
Are cooked carrots as good for you as raw ones?

Alive

What does a plant need to grow?
Why did my Hydrangea flower change colours?
What food do worms in a worm farm like best?
What could be living in me?
What liquid keeps cut flowers fresh longest?

Movement and Power

How does an elevator work?
Do we need oil?
Why did a fridge magnet wreck Mum's credit card?
How does a Robot arm work?
Which nut gives the most energy for hikers?



Presentation and Judging

Head of Science coordinates science teachers and scientists from the College community to judge.
Judging will be timed to coincide with teacher availability.
If the top scoring entries in a category are very close they will be double judged.
Integrity and collaboration are standards and judges decisions are final.

Display

- Write your Name, Class and House on the BACK. This is worth 10 points.
- The entire project needs to fit within a base dimension of 80x60cm. It can go up as far as safety and materials allow. Use stiff card to form the back of your display.
- Use this to present some or all of your information. Information that doesn't fit may be presented in a folder or booklet. Use the base area to display your experiment, model or demonstration.
- All the elements of the type of entry you have chosen must be present in this display for the judges to mark.

Interview

After the display has been marked, the Judging team will call in every entrant and interview them to determine the knowledge and experience acquired by the student during their investigation.

Students will be interviewed in front of their project and will be encouraged to demonstrate and explain how and what they discovered. The judges will ensure that this is a positive experience, they will be sensible of the age and general confidence of each student. There will be other adults in the room at all times.

The judges will ask the following three questions of every entrant, each marked out of 3.

- Why did you choose this question for your investigation?
- What was the most interesting fact or idea that you discovered? Explain.
- Did anything surprise you? (Unexpected problems, results or discoveries.)

Each child will be asked two more questions that lead them to demonstrate their depth of knowledge in their investigation. They will be encouraged to keep sharing.

The judges will keep tally marks of items shared in this conversation. Often the set and leading questions mix organically and the judges will be alert to information offered. Correct use of terms and accurate science will attract marks.

If you don't know which House your child is in, please ask their Homeroom teacher.

Denison	Hunter	Phillip	Fitzroy

Awe & Wonder

are the primary aims of this catalyst activity but scientifically correct and thorough investigations, presented attractively for others to learn from will be

Awarded

Display

Name, Class and House
written on the BACK - 10 points.

Presentation up to 10 points.

- Reports will be marked out of 45.
  (See the rubrics in the appendix)
- Experiments will be marked out of 65.
  (See the rubrics in the appendix)

Interview

There are a total of 20 points possible for the Interview
This is for both Reports and Experiments.

Report v Experiment Explanation
There is a difference in points between these because the scientific process in an experiment requires more disciplined thinking and science skill than a report. Report entries are a valid form to encourage the study of the wonders of our world.

Point Totals: Each Report entry may score up to 85 points.
Each Experiment entry may score up to 105 points.

Category Awards

All entries will be given a participation, merit, commendation or highly commended award, these are informed by the judges points. *Age of the student may reflect a difference in awards from commendation down in projects with similar points.* Each entry will be given the rubric used by the judges to make their decisions. Judges decisions are final.

First in Category

The entries given highly commended in each category will be ranked in points. The entry with the highest total will receive first place in their category.

Duncan Cup

The student who demonstrated the most in-depth knowledge of their field of study will receive this cup. This decision will be made by the interview judges. Where points are the same, their discussion will decide which entry had the more demanding concepts. There will be a Duncan cup awarded for Junior and Middle School at each campus.

Wright Cup

The entries awarded first in category will be compared. The best entry at each campus will be awarded the Wright cup. If there is a draw in points, the judges will deliberate to decide between them based on originality & challenge.
Read later in this booklet why the cups are called the names they are – we have a proud tradition of Science Fair at HAC.

Appendix 1: **Report** Marking Rubric

	Highly Commended	Commended	Merit	Attempted	No Attempt
Question (Title) /5	Question requires investigation from a variety of sources, encourages hands on experiences and ideas for application.	Question leads to a clear path of inquiry and encourages hands on experiences and more questions.	A simple question leads to findings that inform. (What, where, who, when rather than how or why)	Title is a statement rather than a question.	
Description /10	Variables, conditions and the subject of investigation are described with correct terms, observations and research.	The subject of the report is described with correct terms, observations and research.	The subject of the report is described in clear language from simple research and observations.	The subject is described from research.	
Discoveries Recorded /5	In-depth scientific discoveries are explained in diagrams, tables, illustrations and concise explanations.	Correct discoveries are communicated visually with clear labels and concise explanations.	Researched discoveries are communicated clearly with images and labels.	Limited information is recorded about new ideas.	
Demonstrated /5	A discovered construct is replicated in an elegant model, collection or demonstration.	A discovered idea is revealed in an accurate model, collection or demonstration.	Basic science facts are shown in a model or collection.	Science is not substantiated.	
Summary Answer /5	The guiding question is answered with a precise explanation, related examples and thoughtful connection to previous knowledge.	The guiding question is answered with a correct explanation and related examples.	The guiding question is answered with a correct statement related to the presentation.	Loosely connected to the guiding question.	
Impact /5	The relevance of discoveries to the world is explored and new questions raised are reflected on.	Connections between discoveries and experience are made and new questions of inquiry suggested.	Personal response to discoveries is shared with examples of future responses.	Personal response to discoveries is shared.	
Bibliography /10	Multiple references listed in Harvard format, of reliable sources with quotes in presentation.	Multiple references listed in Harvard format, of reliable sources.	Few references of reliable sources, in Harvard format.	Few references listed incorrectly.	
Presentation /10	Neat, easy to read, with strong visual impact, thematic decoration and includes all relevant information.	Neat, easy to read, effective visual impact and includes all relevant information	Neat headings, easy to read text and labels with all relevant information	Most required information is neat and organised under headings.	
Named /10	Clear label on the back with Name, Class and House.	Name, Class and House written on the back.	Name and Class are written on the back.	Name is written on the back	

Appendix 2: **Experiment** Marking Rubric

		Highly Commended	Commended	Merit	Attempted	No attempt
Question (Title)	/5	Clear that will offer a solution to relevant problem	Clear and will confirm or denounce a common belief.	Clear and connected to personal experience.	Question is unclear	
Aim	/5	Objective of experiment clearly stated "To test …"	Aim stated for experiment	Aim lacks sufficient detail	Objective of experiment unclear	
Hypothesis	/5	Thoroughly developed with "If … then… statement"	Sufficiently developed	Partially developed with "I think…"	Unclear	
Vocabulary & Method	/5	Uses scientific language to communicate an elegantly designed sequence of scientific method. Multiple trials included.	Easy to follow sequence of the scientific method is communicated in correct terms. Some trials included.	The sequence of the scientific method has missing elements but scientific terms have been used correctly.	Sequence method is unclear, some term usage is incorrect.	
Variables	/5	One independent variable, an appropriate measurable dependent variable and control variables accurately and clearly stated.	Independent, dependent and control variables stated.	Some variables mentioned or some variables incorrectly listed.	Variables not included.	
Results	/10	A true record of all data is presented in correctly labelled tables, graphs and photographs or film and links to the aim. All appropriate units of measurement included.	A true record of all data is presented in clearly labelled tables or graphs and links to the aim. Some units included.	A true record of most of the collected data is presented and links to the aim.	Data record is unclear and has tenuous links to the aim.	
Conclusion	/10	A logical conclusion has been drawn from the data collected that discusses the accuracy of the hypothesis and the achievement of the aim.	A logical conclusion has been drawn from the data collected that addresses the hypothesis.	A reasonable conclusion has been drawn from the data collected that partially addresses the hypothesis.	An unverified conclusion has been drawn from the data.	
Application	/10	Useful and possible ideas for the solution of the problem addressed are outlined and discussed.	Useful ideas for the solution of the problem addressed are identified and explained.	A way to use the knowledge discovered by the experiment is identified and described.	A way to use the knowledge discovered by the experiment is identified.	
Bibliography	/10	Multiple references listed in Harvard format, of reliable sources with quotes in presentation.	Multiple references listed in Harvard format, of reliable sources.	Few references of reliable sources, in Harvard format.	Few references listed incorrectly.	
Presentation	/10	Neat, easy to read, with strong visual impact, thematic decoration, all headings included and in correct sequence.	Neat, easy to read, effective visual impact and includes all headings.	Neat headings, easy to read text and labels with most headings.	Most required information is neat and organised under headings.	
Named	/10	Clear label on the back with Name, Class and House.	Name, Class and House written on the back.	Name and Class are written on the back.	Name is written on the back	

Appendix 3: Interview Marking Guide

Questions	Score
Why did you choose this question for your investigation?	0 - 1 - 2 .- 3
What was the most interesting fact or idea that you discovered? Explain	0 - 1 - 2 .- 3
Did anything surprise you? (Unexpected problems, results, or discoveries.)	0 - 1 - 2 .- 3
Continued questions at the judge's discretion in response to the student's disclosures and display. Marks awarded for: • Use and understanding of scientific terms and concepts • Thorough explanation and/or demonstration of discoveries • Scientific reasoning and connections made between discoveries and applications • Spontaneous observations and sharing of discoveries in the process of their investigation	Up to 11 marks.
Judge(s)	Total Interview Score /20

Appendix 4: How to acknowledge your sources and construct a Bibliography

For Books and Journals

Author's family name, Initials of first name - *Title* - Publisher - Year of publication

Jones, C. *Native Animals of Australia*, Macmillian, 1981.

Smith, A. *Feral Animals of Australia*, Longman Cheshire, 1994.

Talle, G.M. *In the Wild*, Australian Geographic, Issue 161, 2016.

For Websites, including vlogs and blogs

Title of website,	link,	date accessed.
Science Buddies	http://www.sciencebuddies.org/	July 2020.

Entries must be listed in alphabetical order according to the family name of the author or title of the website. All together the sample entries would look like this:

Jones, C. *Native Animals of Australia*, Macmillan, 1981.

Science Buddies http://www.sciencebuddies.org/ July 2020.

Smith, A. *Wild Animals of Australia*, Longman Cheshire, 1994.

Talle, G.M. *In the Wild*, Australian Geographic, Issue 161, 2016.

In text referencing:

When you use someone else's ideas, words, diagrams, pictures or statistics in your work, you need to say where you got it from. In Harvard Style, you do this by writing the author's last name and the year the book or website was made, in brackets, right after the sentence. The reference you use should also be listed in your Bibliography.

Example:

Dingos are wild animals (Smith, 1994) but have been successfully tamed.

That means the information came from a book or source written by someone named Smith in the year 1994.

Resources

https://www.need.org/need-students/science-fair-projects/

This site has lists of topic ideas and structures of investigations and experiements that families can adapt.

https://www.sciencebuddies.org/

Join this site to get access to grade appropriate science projects.

https://sciencefaircentral.com/students/scientific-projects

This site has topic specific ideas – make sure you adapt them to the marking rubric of your choice.

https://www.scienceweek.net.au/diy-science/

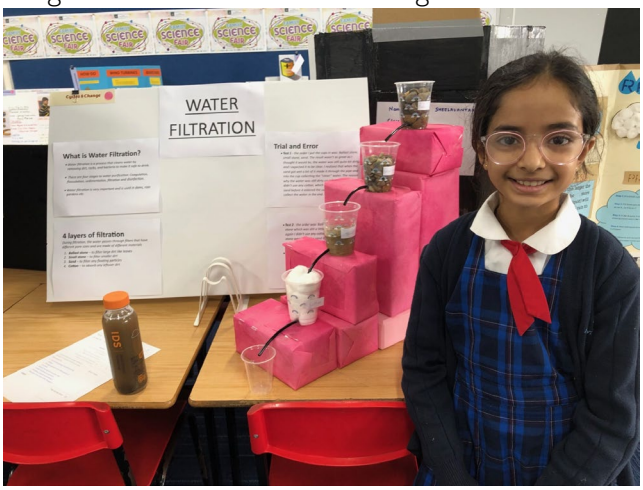
This site has simple discovery activities that could be developed into reports or experieemnts.

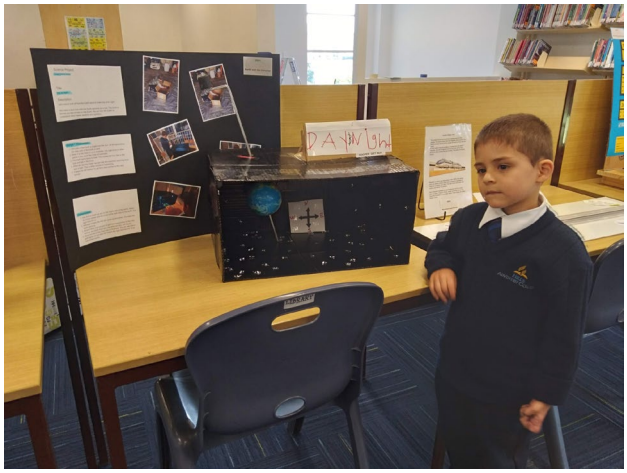
https://www.publish.csiro.au/book/7556

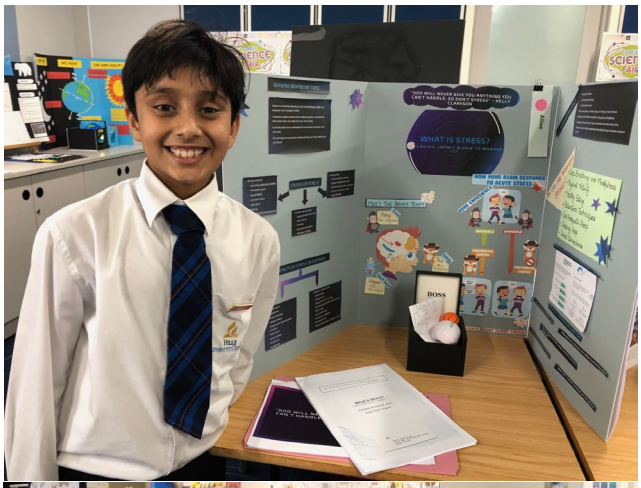
This is a bookstore to buy books with science project ideas from AUatralia's leading science organisation.

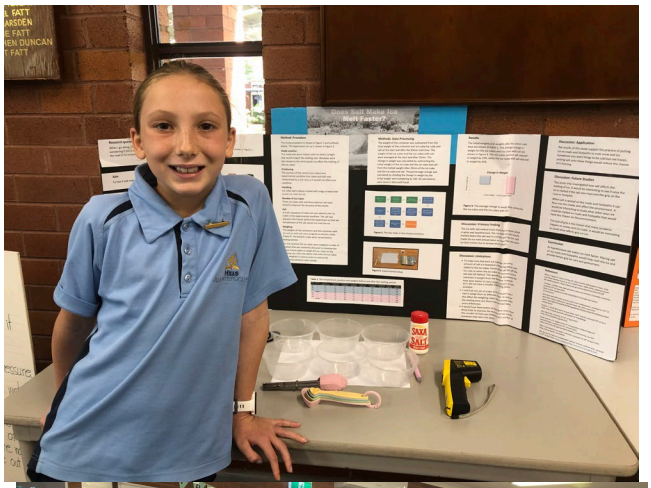
Past Projects

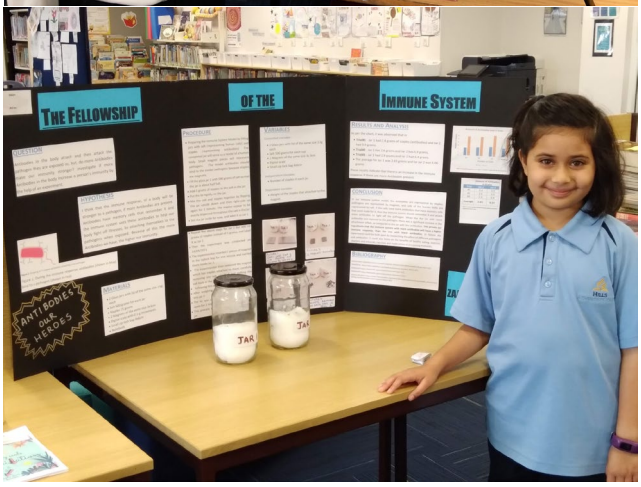
Images from Hills Adventist College Science Fairs in previous years.











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Science Fair Guide
for K - 6 Students & their Family

Science Fair Cup Names

The first Family Science Fair at Hills Adventist College (then Castle Hill Adventist Primary School), was in 2002. It continues to be a key catalyst event in our programme for high potential students.

The first *Best in Fair* cup was won by the Wright family with a demonstration of centrifugal force. This is now known as the Wright Cup.

The student who demonstrates the most in-depth knowledge of their area of study in the interview with a judge wins the Individual knowledge cup. This prize was won by Paul Duncan for his incredible mastery of hydroelectric production at our inaugural Science Fair. This is now known as the Duncan Cup.

Hills Adventist College is very proud of the excellence of thinking and opportunity for discovery that this catalyst activity generates in our community and celebrate these long-held values by maintaining this history.