

Marlborough Lines

Science & Technology Fair

The Lions Club of Blenheim invites you to participate in the twenty fourth
Marlborough Lines Science and Technology Fair

A Science & Technology Fair is a display of science investigations and technological designs produced by school students. This web site aims to help students plan a scientific investigation or a technological design for the Marlborough Fair.

WHAT IS SCIENCE FAIR?

Exhibitors may enter in one of the following groupings:

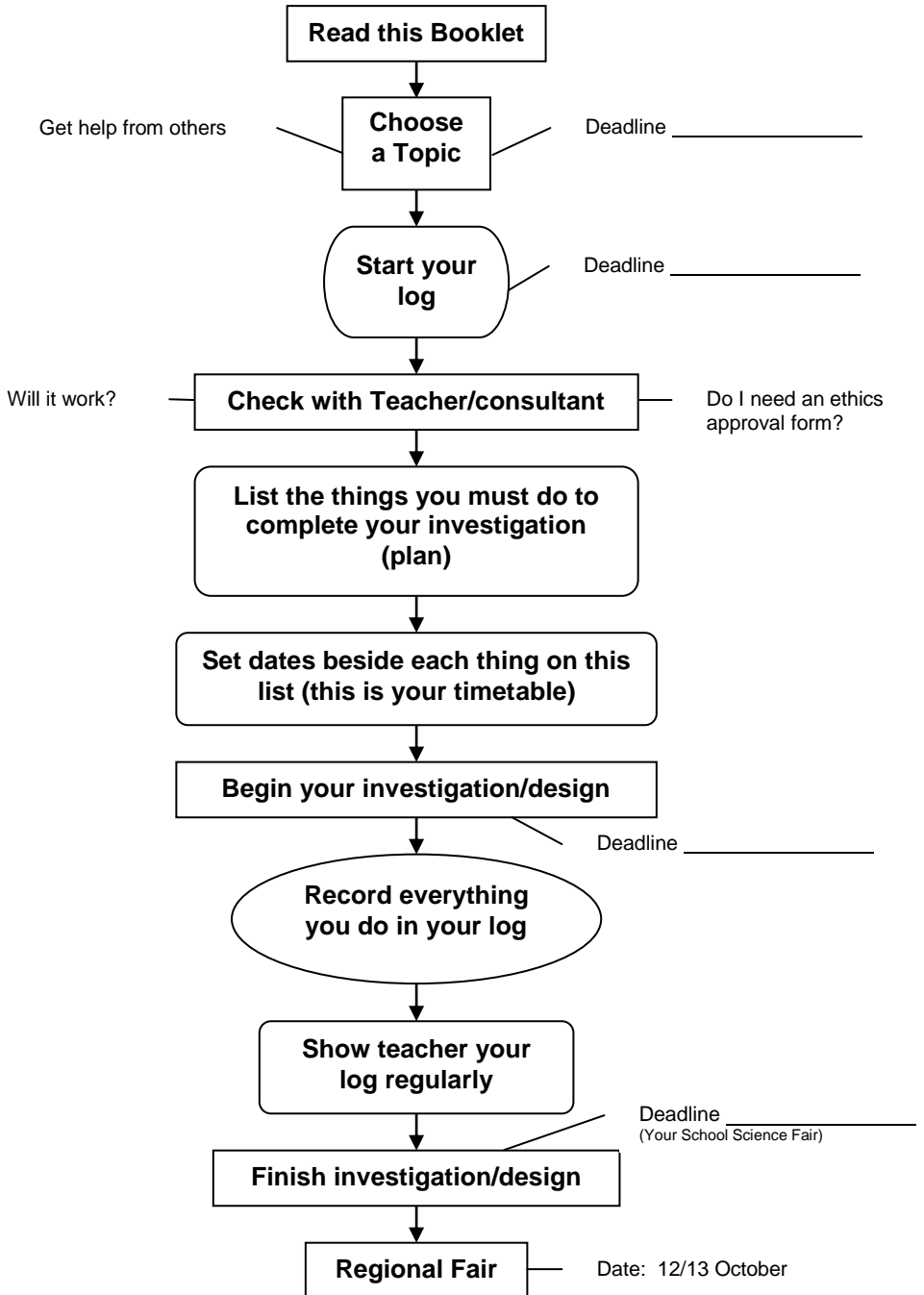
<p>Primary Classes Yrs 3-4 and Yrs 5-6 groupings</p> <p>Intermediate & Senior Classes Yrs 7-8, Yrs 9-11, Yrs 12-13</p> <p>Categories:</p> <p><u>Science</u></p> <p><u>Technology</u></p>

THE JUDGING CRITERIA

Yrs 3-6 (Primary)	
Focusing and Planning/Need	(0-10)
Information Gathering/Recording	(0-10)
Processing & Interpreting/ Development	(0-10)
Reporting/Evaluation	(0-10)
Maximum Total	40

Yrs 7-13 (Intermediate & Senior)	
Understanding/Development	(0-30)
Originality & Creativity/Need	(0-15)
Technical Skill	(0-15)
Thoroughness & Effort	(0-15)
Presentation	(0-15)
Knowledge/Evaluation	(0-15)
Maximum Total	100

WHAT TO DO



Remember you can get lots of help and ideas from teachers and others but the work must be your own.

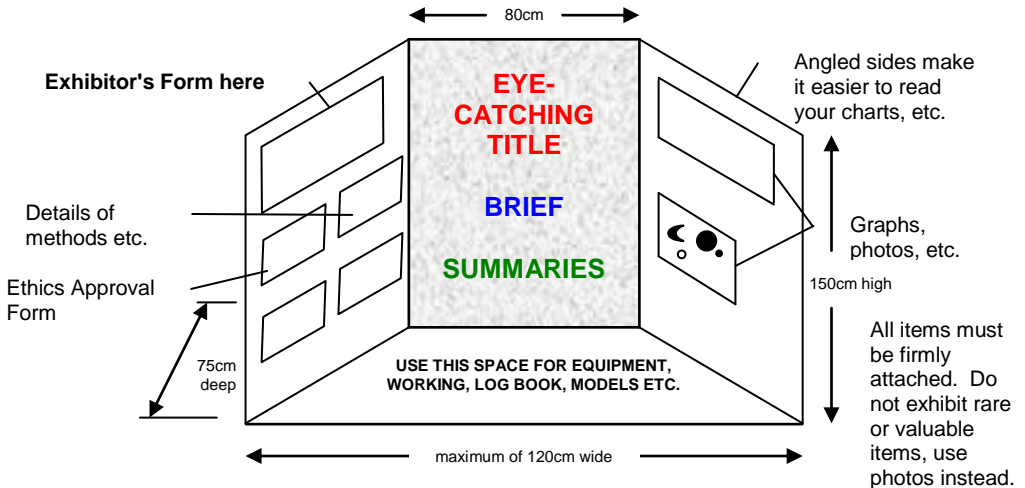
PRESENTATION OF EXHIBITS

This is a major step. Your entry can only be judged on **your exhibit, log books, and what you tell the judges** - be prepared.

Have an appropriately designed display stand.

You are limited to a table space of 120cm wide by 75cm deep by 150cm high. The display must be free standing, robust and provided by the entrant.

This style of display has been found to be suitable for most entries.



Oversized entries will not be accepted unless you have written permission from the Organisers.

GETTING STARTED

The plan on page two will give you a guide for deadlines you should set if you wish to exhibit.

If you are to compete then you must follow the diagrams for the

SCIENTIFIC INVESTIGATION PROCESS (refer to page 4)
or the
DESIGN TECHNOLOGY PROCESS (refer to page 5)

KEEP A LOG: A complete diary of everything you do, from the day you choose the question, date and time spent, to the day you present your investigation for marking. Include methods, all raw data, calculations you made, problems you encountered, thoughts, help you received, as well as your conclusion and evaluation.

SCIENCE INVESTIGATIONS (Investigating a Question)

What made you think of this question?

QUESTION

Which, what, or how questions are best for you. Not why.



What do you think might happen?

HYPOTHESIS

Predict the answers to your questions.



Experiment or observe. Make comparisons.

TEST

Explain your methods. Check with your teacher/mentor. Will it work?



Observe results. Record data in Log Book.

RECORD

You may display and log this information.



Do your results agree with your predictions?

CONCLUSION

What next? Do you need to go back and make another hypothesis?

Your investigation will lead to further thinking and future investigation.

TECHNOLOGY DESIGNS (Solving Problems)

What need or opportunity are you trying to meet?

NEED OR PROBLEM

Is it a problem/need you can solve? Do solutions already exist?



Study the problem/need. Explore the opportunities.

GATHER INFORMATION ABOUT NEED/PROBLEM

Collect information about the problem. Survey, research for possible solutions.



How are you going to approach the problem? Get help from an expert.

DEVELOP A PLAN

List all your ideas and select one to develop further. List steps towards solving the problem.



Produce your first design or solution to solve the problem.

DESIGN A PROTOTYPE/SOLUTION

Make a model. Carry out some fair tests. How well is it working?



Does it meet the need or solve the problem? Could it be used by anyone?

TEST AND EVALUATE

Trial your prototype/solution. Record responses to its effectiveness.

Your prototype/solution will help someone. Share your design. Go into production.

A "solution" could be a design or a method.

ETHICS APPROVAL

Human and Animal Ethics

If you are doing an investigation which involves **humans or animals** you must complete an **ethics form before you start** or you can not be considered for an award at the regional fair.

To get a form you will need to go to the websites below

For Human and Animal ethics: <http://www.scitec.co.nz/important.shtml>

If you complete the forms electronically don't forget to send a signed copy by post as well and **Don't forget to keep a copy.**

See your teacher if you need help filling it out.

You must complete the **project information sheet** for the people in your study and their parents to read so they know what they have to do and any risks they may be exposed to. If they agree to take part in the investigation they or their parent (if they are under 16) must sign the **consent form**.

You must **keep** all **consent forms** and **display** the **ethics** approval or exemption **form** for judges to see.

Your teacher has copies of all these forms or you can download them from this site.

If you have any problems contact hugh.lensen@mgc.school.nz

SAFETY RULES

1. All electrical apparatus must have been checked by a competent electrician.
2. Each project requiring electricity must have a three metre extension cord.
3. Do not have corrosive chemicals on display. Use water or dyes as substitute. If you need to show the judges chemicals in action remove them when you have finished.
4. An agar plates must be sealed with cellotape - use photos instead.
5. All projects requiring participation by visitors (by pushing buttons, levers etc.) must be designed so that it is foolproof and robust and does not require operation or explanation by the Exhibitor.
6. Any exhibit which is not safe may be removed.

ENTRY

Your teacher will enter you in the Regional Fair by completing the schools **science fair entry spread-sheet**. Make sure they have got your details correct.

You will receive printed Exhibit and Judges Forms and your certificate. Attached the exhibit form to the top left hand side of your exhibit, leave your certificate by your exhibit and give your Judges form to the judge at judging time.

ADDITIONAL HELP

Parents should always help where it is needed and teachers should not hesitate to help the students in any way either. BUT the investigation should be the students and the conclusion reached be ones that the student holds firmly.

Judges in science fairs will quickly sort out investigations which are those of adults rather than the pupil's. When a child has used additional help a credit should be acknowledged.

PRIZES

A scholarship for further tertiary education will be offered again.

Best Exhibits in the Fair:

First \$200
Second \$100
Third \$50

Senior Science Exhibit	Intermediate Science Exhibit	Primary Science Exhibit
First \$100	First \$100	First \$100
Second \$50	Second \$50	Second \$50
Third \$30	Third \$30	Third \$30

Senior Technology Exhibit	Intermediate Technology Exhibit	Primary Technology Exhibit
First \$100	First \$100	First \$100
Second \$50	Second \$50	Second \$50
Third \$30	Third \$30	Third \$30

Prizes for each year grouping (subject to judges standard):

	yr 3-6	yr 7-13
Gold Awards	\$30	\$50
Highly Commended	\$15	\$20

SPECIAL PRIZES

The following Special Prizes have been presented in the past.

- Best Exhibit in the Fair
- Best Technology Exhibit
- Best Exhibit in Horticulture or Agriculture
- Best Use of Flour for Baking
- Air & Water Award - NIWA
- Best Soil Science Prize
- Best Radio Technology/Science
- Best Exhibit in the Primary Section
- Best Exhibit in the Intermediate Section
- Best Electrical Content
- Mining Industry Award
- Best Environmental Exhibit
- Sport Science
- Best Construction Exhibit

SPECIAL PRIZES

The following Special Prizes were presented in 2000 and may be awarded in 2001.

- Best Exhibit in the Fair
- Best Technology Exhibit
- Best Exhibit in Horticulture or Agriculture
- Best Use of Flour for Baking
- Air & Water Award - NIWA
- Best Soil Science Prize
- Best Radio Technology/Science
- Best Exhibit in the Primary Section
- Best Electrical Content
- Mining Industry Award
- Best Environmental Exhibit
- Sport Science
- Best Construction Exhibit

Alterations may be made to these prizes depending on sponsors.

SECURITY

The Science & Technology Fair Committee will provide security but can take no responsibility for exhibits while they are on exhibition.

Valuable items should be secured or, if necessary, removed after judging.

JUDGING

Yr 7-13 Judging will begin any time after 8.30am on Tuesday 17 September

Yr 3-6 Judging will begin any time after 12.30pm on Tuesday 17 September

You are expected to be present during judging when you will be asked for your judging form and to explain your exhibit. As soon as your exhibit has been judged you are asked to make your way back to school.

By the time the Fair is opened for public viewing at 4.00pm, most prizes will be shown on participation certificates, however the major prize giving ceremony is on Friday evening.

PUBLIC VIEWING

The Science & Technology Fair will be open to the public and school groups from:

4.00pm to 7.00pm on Tuesday 17th September

and 9.00am to 7.00pm on Wednesday 18th September

It is suggested that no more than two class groups from one school view at one time.

Viewing Donation: A gold coin donation will be appreciated.

PRIZE GIVING

This will be held at 7.00pm on Wednesday 18th September at the Fair venue.

CLEAN UP

All exhibits must be collected after the Prize Giving Ceremony between 8.00pm and 8.30pm. If you are unable to collect your exhibit then you should arrange for someone to collect it for you.

The Science & Technology Fair Committee can take no responsibility for exhibits after 8.30pm