Rosalie PRIMARY SCHOOL

3 DAY EVENT

ROSALIE SCIENCE FAIR

16-18 AUGUST 2016 • TERM 3

COMPETITION PLANNING GUIDE

A STEP BY STEP GUIDE TO CREATING AMAZING SCIENCE PROJECTS

FROM THIS POINT ON YOU ARE NOW... A SCIENTIST. SO HAVE FUN!

PRIZES TO BE WON

Rosalie Science Fair Planning Guide

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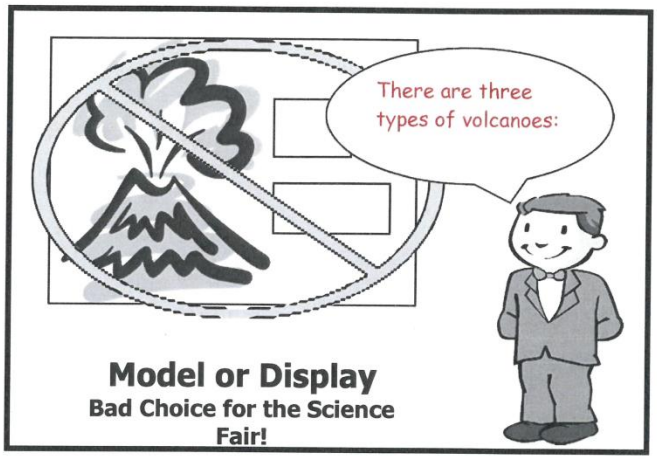
Types of Science Projects:

There are two types of science projects: **Models** and **Experiments**. Here is the difference between the two:



BORING !!!!! DON'T DO THIS.....

A Model, Display or Collection:

Shows how something works in the real world, but doesn't really test anything

Examples of display or collection projects can be: "The Solar System", "Types of Dinosaurs", "Types of Rocks", "My gum collection..." Examples of models might be: "The solar system" or "How an Electric Motor Works", "Tornado in a Bottle"

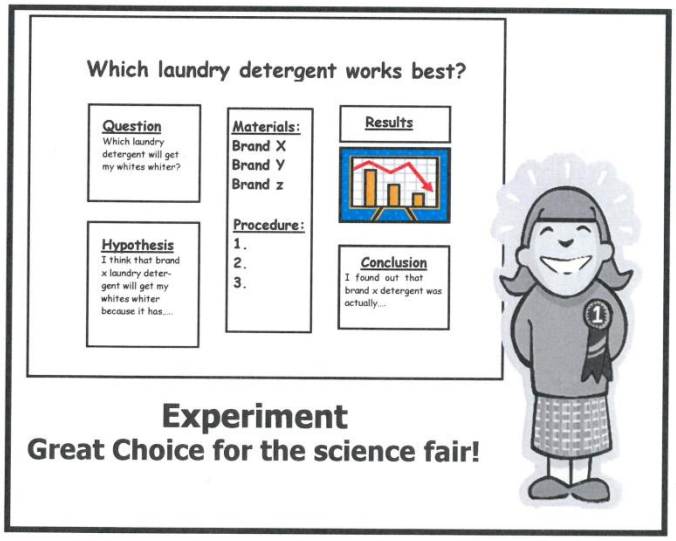
COOL!!!!! DO THIS

An Experiment:

Lots of information is given, **but it also has a project that shows testing being done and the gathering of data.**

Examples of experiments can be: "The Effects of Detergent on the Growth of Plants", "Which Paper Towel is more absorbent" or "What Structure can withstand the Most Amount of Weight"

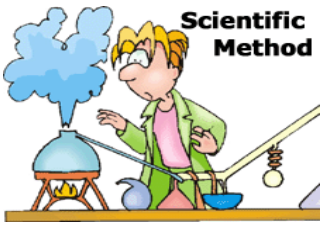
You can tell you have an experiment if you are testing something several times and changing a variable to see what will happen.
We'll talk about variables later....



So What Type of Project Should You Do?

Even though you can learn a lot from building a model or display, we recommend that you do an **Experiment!!!** Why? Well, they are fun, they are more interesting and most of all, they take you through the **SCIENTIFIC METHOD,** which is the way real scientists investigate in real science labs. Besides that, the **scientific method** is what the judges are looking for!!

What is the Scientific Method?



The **Scientific Method** is a **process** that helps scientists conduct **fair & valid** investigations that feature well **supported evidence**. Check out the following steps that will help you create great science fair projects of your own.

The Question

- Your science fair project **starts with a question**. This might be based on an observation you have made or a particular topic that interests you. Think what you hope to discover during your investigation, what question would you like to answer? Your question needs to be about **something you can measure** and will typically start with words such as **what, when, where, how or why.**

Background Research

- Talk to your science **teacher**, your **parents** and **use resources** such as **books** and the i**nternet** to perform **background research** on your question. Gathering information now will help prepare you for the next step in the **Scientific Method**.

Hypothesis

- Using your **background research** and current knowledge, make an **educated guess** that answers your question. Your **hypothesis** should be a simple statement that expresses **what you think will happen.**

Experiment

- Create a **step by step procedure** and **conduct an experiment that tests your hypothesis**. The experiment should be a **fair test that changes** only **one variable at a time** while keeping everything else the same. **Repeat the experiment** a number of times to ensure your original results weren't an accident.

Data Collection

- **Collect data** and **record** the progress of your experiment. **Document your results** with detailed **measurements**, **descriptions** and **observations** in the form of **notes, journal entries, photos, charts and graphs.**

Observations

- **Describe the observations** you made during your experiment. **Include information** that could have affected your results such as **errors**, **environmental factors** and **unexpected surprises**.

Conclusions

- **Analyse the data** you collected and summarise your results in written form. Use your analysis to answer your original question, do the results of your experiment support or oppose your hypothesis?

Communication

- Present your findings in an appropriate form, whether it's a final **report** for a scientific journal, a **poster** for school or a **display board** for a science fair competition.

Choosing a category that interests you…

There are **three different categories** of the Science Fair to choose from. They are:

Life Science:

This category deals with all animal, plant and human body questions that you might have and want to do an experiment about. Remember that it is against Science Fair Rules to intentionally hurt an animal during an experiment. If you are dealing with animals, please let an adult assist you. It is okay to do experiments on plants, as long as they don't belong to someone else. (Don't do an experiment on your mum's rose bushes unless you ask her first...!)

Life science also includes studying behaviours, so it's a perfect category to try taste tests, animal behaviour training (or even training behaviour in humans...like baby brothers or sisters...)

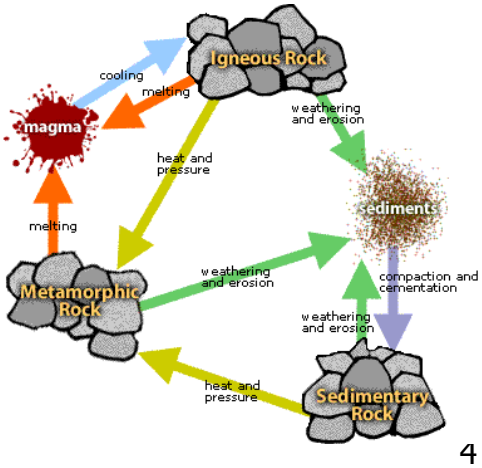
Physical Science:

If you like trying to figure out how things work, then this is the category for you! It includes topics about matter (http://www.chem4kids.com/files/matter_intro.html) and structure, as well as electricity, magnetism, sound, light or anything else that you might question, "How does it work and what if I do this to it, will it still work?" *But remember, you always need to ask an adult first (and always make sure there is one of those adults with you when you try it.)*

Physical Science also includes the composition of matter and how it reacts to others. These are the science experiments that may have bubbling and oozing going on, like figuring out what is an acid and what is a base. It is a perfect category to try to mix things together to see what will happen.

Again, if you are experimenting with possibly dangerous things, you need to recruit an adult to help you out.

Earth and Space Sciences:



This category is really awesome because it covers all sorts of topics that deal with the Earth or objects in space. This includes studying weather, geology (which is the study of everything that makes up the Earth, like rocks, fossils, volcanoes, etc...), and the study of all that is in space, including the stars, our sun and our planets.

Why not try a local topic?

Both Lake Jualbup and King's Park offer some fantastic inquiry science possibilities. Some ideas…….

1. Why and how much does the water level of Lake Jualbup change over a certain period of time?
2. What species of frogs and how many live at Lake Jualbup?
3. Does the temperature of the water change in Lake Jualbup over a certain period of time?
4. Which waterbirds live and breed at Lake Jualbup during the season of Makuru (June, July)?
5. Are there any turtles living at Lake Jualbup? If so what species and how many?
6. Does the pH level (acidity) of Lake Jualbup change over a certain period of time? How might this affect the flora and fauna that live there?
7. How many species of orchids flower in Kings Park during July?
8. What native plants flower at Synergy Parklands during the season of Makuru (June, July)?
9. Can you find turtle frogs in Kings Park? What kind of environment do they need?
10. How many types of birds can you identify in Kings Park during a certain period of time?

…….and these are just a few!

Step 1: Coming up with a good question to Investigate…

Now that you have picked out a topic that you like and are interested in, it's time to write a question or identify a problem within that topic that you can investigate. To give you an idea of what we mean you can start off by filling in the question blanks with the following list of words:

The Effect Question:

What is the effect of_____on_____?

sunlight	on the growth of plants
eye colour	pupil dilation
brands of soda	a piece of meat
temperature	the size of a balloon
oil	a ramp

The How Does Affect Question:

How does the_____affect_____?

colour of light	the growth of plants
humidity	the growth of fungi
colour of a material	its absorption of heat

The Which/What and Verb Question

Which/What_____(verb)_____?

paper towel	is	most absorbent
foods	do	meal worms prefer
detergent	makes	the most bubbles
paper towel	is	strongest
peanut butter	tastes	the best

Now it's your turn:

Create your Science Fair question using the "Effect Question", the "How does- Affect Question" or the "Which/What and Verb Question":

_____

_____

_____

Step 2 : Doing the Research and forming a Hypothesis

So you've picked your category, chosen a topic and written an investigating question. Now it is time to research your problem as much as possible. Becoming an expert at your topic is what real scientists do in real labs.

So how do you become an expert?

YOU READ!!!!
READ about your topic. READ encyclopaedias. READ magazine articles and books from the library. READ articles from the internet. Take note of any new science words you learn and use them. It makes you sound more like a real scientist. **Keep Track of all the books and articles you read**. **(Make a reference list as you go)** You'll need that list for later.

YOU DISCUSS!!
Talk about it with your parents. Talk about it with your teachers. Talk about it with experts like veterinarians, doctors, weathermen or others who work with the things you are studying. Sometimes websites will give you e-mail addresses to experts who can answer questions…. *But again, do not write to anyone on the internet without letting an adult supervise it.*
(*hint: take pictures of yourself interviewing people)

Whew…..!

Then when you think that you can't possibly learn anymore and the information just keeps repeating itself, you are ready to...

Write a Hypothesis

Now it is the time to **PREDICT** what you think will happen if you test your problem. This type of "SMART GUESS" or PREDICTION is what real scientists call a **HYPOTHESIS**. Using this fancy word will amaze your friends and will have you thinking like a fully - fledged scientist.

So how do you begin? Well, just answer this very simple question:

What do you think will happen, (even before you start your experiment)?

Example Problem: *Which paper towel is more absorbent?*

Example Hypothesis: *I think Brand X will be more absorbent because it's a more popular brand, it is thicker and the people I interviewed said that the more expensive brands would work better*

**Handy Hint! This hypothesis not only predicts what will happen in the experiment, but also shows that the "Scientist" used research to back up his/her prediction.

Now it's your turn:

Write down the problem and create a **hypothesis** based on what you have researched.

Problem:_____

_____

Research: My problem about this subject is: _____
(sample topics could be magnetism, electricity, buoyancy, absorbency, taste, plant growth, simple machines or other scientific topics that relate to your problem. If you are having problems finding out what the topic is, ask your teacher or an adult to help you on this one….)

Books I found in the library on my topic are:
Title: Author:

_____

_____

_____

Internet sites that I found on my topic are:

_____

_____

_____

People I talked to about my topic are:

_____

_____

_____

Some important points that I learned about my topic are

_____

_____

_____

_____

Hypothesis: I think that _____

(will happen) because (my research shows…)_____

_____

_____

_____

_____

Step 3: Testing your Hypothesis by doing an experiment

Now we've come to the good part. The part that all scientists can't wait to get their grubby little hands on… you guessed it… The **EXPERIMENT!**

Designing an experiment is really cool because you get to use your imagination to come up with a test for your problem, and most of all, you get to prove (or disprove) your Hypothesis. **Now Science Fair Rules state that you cannot perform your experiment live, so you'll have to take plenty of pictures as you go through these seven very simple steps.**

1st-***Gather up your materials-*** What will you need to perform your experiment? The safest way to do this is get that adult you recruited to help you get the stuff you need. (Oh, did we mention to take pictures or draw pictures of your materials?) This will come in handy when you are making your display.

2nd -***Write a procedure -*** A procedure is a list of steps that you did to perform your experiment. Why do you need to write it down? Well it's like giving someone a recipe to your favourite dish. If they want to try it, they can follow your steps to test if it's true. Scientists do this so that people will believe that they did the experiment and also to let other people test what they found out. (Did we mention to take pictures of yourself doing the steps?)

3rd -***Identify your variables-*** The variables are any factors that can change in an experiment. Remember that when you are testing your experiment you should only **test one variable at a time** in order to get accurate results. In other words, if you want to test the affect that water has on plant growth, then all the plants you test should be in the same conditions, these are called **controlled variables:** same type of dirt, same type of plant, same type of location, same amount of sunlight, etc. The only variable you would change from plant to plant would be the amount of water it received. This is called the **independent or manipulated variable.** The independent variable is the factor you are testing. The results of the test that you do are called the **dependent or responding variables.** The responding variable is what happens as a result of your test. Knowing what your variables are is very important because if you don't know them you won't be able to collect your data or read your results.

4th- ***TEST, TEST, TEST.*** Remember that the judges expect your results to be consistent in order to be a good experiment, in other words, when you cook from a recipe you expect the outcomes to be the same if you followed the directions (or procedure) step by step. So that means you need to do the experiment more than once in order to test it properly. We recommend three times or more. More is better!
(Don't forget to take pictures of the science project being done and the results.)

5th- ***Collect your DATA.*** This means write down or record the results of the experiment every time you test it. The data you collect needs to be organised in a way that makes it easy to read the results. Most scientists use tables, graphs and other graphic organisers to show their results. Organising makes the results easy to read, and much easier to recognise patterns that might be occurring in your results. (Besides, it impresses the judges when you use them.) But don't make a graph or table because we asked you to, use it to benefit your project and to help you make sense of the results. There is nothing worse than having graphs and tables that have nothing to do with answering the question of a science project.

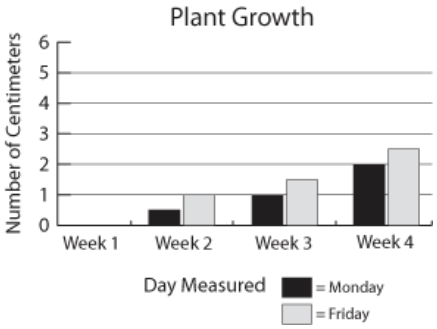
Time out: How Do You Collect Data?!!?

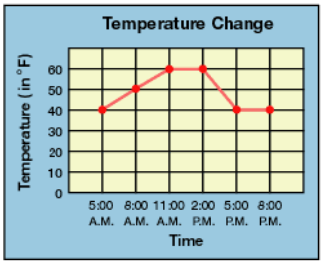
- **Keep a science journal:** A science journal is a type of science diary that you can keep especially if your experiment is taking place over a long period of time (a week or more) You can record observations, collect research, draw pictures and diagrams about your topic and jot down any additional questions you might have for later.
- **Have the right tools to do the job:** Make sure you have the stuff you need to take accurate measurements like rulers, metre tapes, thermometers, graduated cylinders or measuring cups that measure volume. The recommended standard of measurement in science is metric so keep your measurements in centimetres, metres, litres, Celsius, grams, etc.
- **Tables, charts and diagrams** are generally the way a good scientist would keep track of experiment trials. Remember you are testing at least 3 times or more. A table is organised in columns and rows and **ALWAYS** has labels or headings telling what the columns or rows mean. You will probably need a row for every time you did the experiment and a column telling what the independent variable was (what you tested) and the responding variable (the result that happened because of the independent variable).

Plant	Amount of water per day	Size it grew in two weeks
(controlled variable)	(independent variable)	(responding variable)
Plant A	none	.5 cm
Plant B	5 ml	2 cm
Plant C	10 ml	5 cm
Plant D	20 ml	7 cm

- **Be accurate and neat!** When you are writing your tables and charts, please make sure that you record your data in the correct column or row, that you write neatly, and most of all that you record your data as soon as you collect it **SO YOU DON'T FORGET WHAT HAPPENED!!!!** Sometimes an experiment might be hard to explain with just a table, so if you have to draw and label a diagram (or picture) to explain what happened, it is recommended that you do.
- **Use the right graph for your experiment**. There is nothing worse than a bad graph. There are all types of graph designs, but these seem to be easy to use for science fair experiments.
  - **Pie graphs** are good to use if you are showing percentages of groups. Remember that you can't have more than 100% and all the pieces need to add up to 100%. This type of graph is great if you are doing surveys.

  - **Bar graphs** are good to use if you are comparing amounts of things because the bars show those amounts in an easy to read way. This way the judges will be able to tell your results at a glance. Usually the bars go up and down. The x axis (or horizontal axis) is where you label what is being measured, (like plant A, B, C and D) and the y axis (or vertical axis) is labelled to show the unit being measured (in this case it would be centimetres that the plant grew).





Line graphs are good to use if you are showing how changes occurred in your experiments over time. In this particular case you would be using the x axis to show the time increments (minutes, hours, days, weeks, months) and then you would use the Y axis to show what you were measuring at that point in time.

….And now back to the Experiment Steps

6th- ***Write a Conclusion:*** tell us what happened. Was your hypothesis right or wrong or neither? Were you successful, did it turn out okay? Would you change anything about the experiment or are you curious about something else now that you've completed your experiment. And most of all, **TELL WHAT YOU LEARNED FROM DOING THIS.**

7th- ***Understand its Application:*** Write about how this experiment can be used in a real life situation. Why was it important to know about it?

Now it's your turn!

Materials (take pictures!)

List the materials you will need for your science experiment here:

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

Variables:

List the ***variables*** that you will control, the variables that you will change and the variables that will be the results of your experiment:

My ***controlled variables*** are (the stuff that will always be the same):

_____

_____

My **independent variable** is (this is the thing that changes from one experiment to the next, it is what you are testing):

_____

_____

My ***responding variables*** might be (in other words, the results of the experiment):

_____

_____

_____

Procedure

List the steps that you will have to do in order to perform the experiment here:

1. _____
2. _____
3. _____
4. _____
5. _____

Design a table or chart here to collect your information

(Did we mention that you needed to take pictures of you doing the actual experiment?)

Use graph paper to graph the results from your table.

Conclusion:

Now tell us what you learned from this and if you were able to prove your hypothesis. Did it work? Why or why not? What did the results tell you? Sometimes not being able to prove a hypothesis is important because you still proved something. What did you prove?

_____

_____

_____

_____

_____

_____

_____

Application

(How does this apply to real life?)

It is important to know about the results of this experiment because…….

_____

_____

_____

_____

_____

Step 4: The Presentation and why you needed all those pictures……

But first, a school fable…….

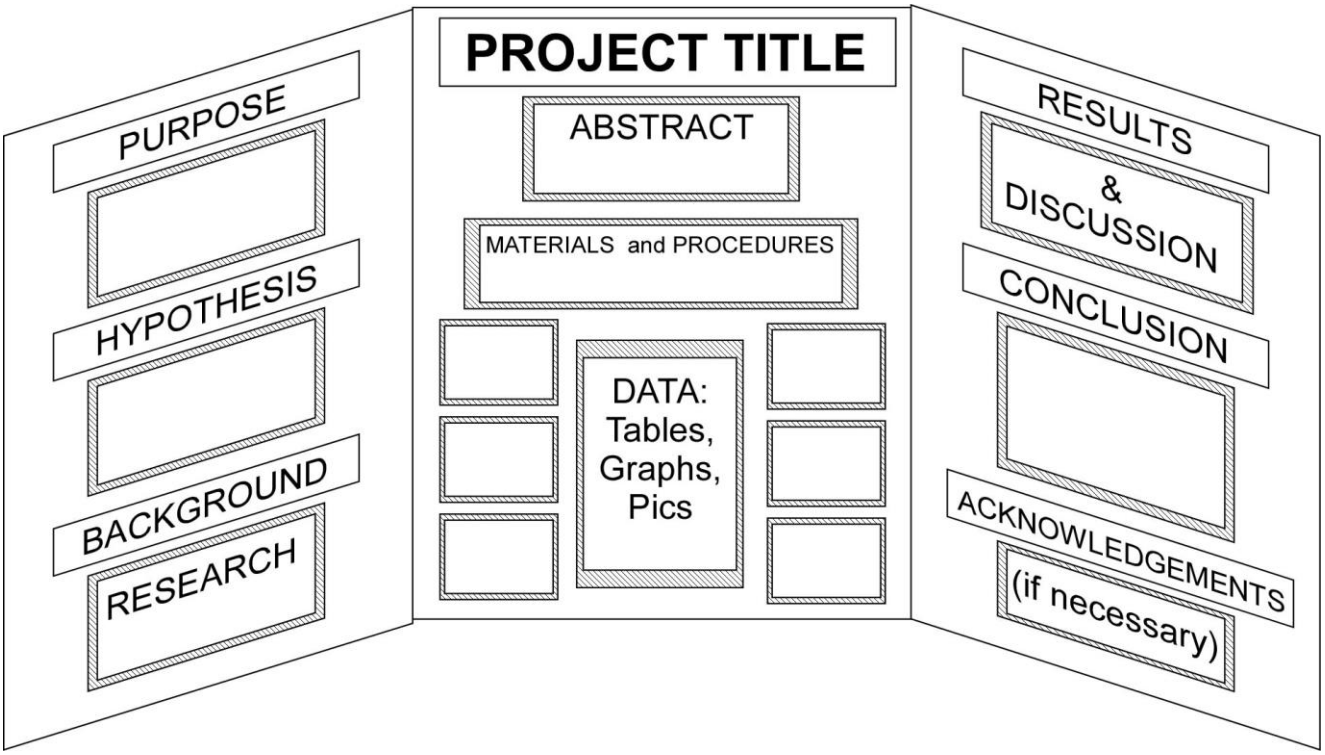
Sammy and Sally both baked cakes for the cake stall with the same mix and by following the same directions. When Sammy got his cake out of the oven, he carefully took it out of the pan, smoothed the chocolate icing neatly and decorated his cake so that it looked delicious. Sally, on the other hand, was rushing and cracked her cake when taking it out of the pan. She globed the icing heavily on parts of the cake, trying to hide the broken bits. As you may have already guessed, everyone wanted some of Sammy's cake and no one wanted Sally's cake. Sally couldn't figure out why, because she tasted both and they both tasted the same……..

You may have become a leading expert in your topic and had the most interesting experiment results, but if you don't make your science project look 'delicious' for the judges, well your chances of winning may crumble, just like Sally's cake. Your project display is like an advertisement for all your hard work. So take our advice: Be NEAT and CLEAR in your presentation. Judges like to be able to easily read and follow the progression of your experiment. Neat clear tables, graphs and, you guessed it…….lots and lots of pictures! (Did you remember to take pictures?)

Making a Mouth Watering Display

<u>Essential Requirement</u>- The display must be able to stand on its own.

This is an example of a neat looking display that will stand up on its own if heavy card is used. If you have any models or 3D articles for your display, they can go on the table in front of your display board.



Display Beauty Secrets

- Use colour, but not so much that it makes your project too 'busy.'
- Keep your display lay out clear and easy to follow.
- Typing headings and information helps to keep your display neat and easy to read.
- Make sure you glue everything down well, including corners!
- Mounting white paper and pictures on coloured paper helps to give it a frame and make it stand out more.

Junior Category PP- Year 2 What the Judges Look For

Lots of people are scared to talk to the judges. Just remember they are a fellow scientist and they really are just interested in hearing what you have to say about your project. Understanding what the judges will be looking for will help you to prepare your project and presentation. We have listed all the things you will need to do here:

Criteria	Point Allocation	Helpful hints on what to say and do!
1. Display well organised and neatly presented	2 points	Stand to side of the display so the judges can see it clearly
2. Clearly stated title, inquiry question and reasonable hypothesis	3 points	Introduce yourself, point to the title of your display and tell the judges why you chose to study this topic. State what your inquiry question was and tell them about your hypothesis. (what you thought would happen)
3. Clearly explained experimental procedures	3 points	Tell about your experiment, the steps you took to do it.
4. Effective analysis of data clearly stating the experiment results(graphs, charts or tables)	3 points	Explain what your data means. Make sure you can read your graphs and tables. Do your results support your hypothesis?
5. Use of scientific terms or topic vocabulary appropriate to year level	2 points	Make sure you sound like an expert on your topic and use science words, particularly from the scientific method like: problem, hypothesis, procedure, results, conclusion.
6. An appropriate conclusion based on the results was included	3 points	Let the judges know if you were right about your hypothesis. How could your experiment results help in real life? “My experiment about paper towel absorbency could help people save money by buying the most effective type of paper towel.”
7. Effective coverage and closure of presentation	2 point	Make sure you tell the judges everything about your experiment. If you get lost or forget where you are, look at your display and follow it piece by piece. This will help you to stay on track. When you are done, shake hands with the judges and thank them for their time.

Possible Total of 20 points

Remember to relax, smile and look the judges in the eyes when you speak to them. This will help you to feel and look confident. Remember, you are the expert on your topic and you had fun doing the project!

Middle Category- Years 3-4 What the Judges Look For

Lots of people are scared to talk to the judges. Just remember they are a fellow scientist and they really are just interested in hearing what you have to say about your project. Understanding what the judges will be looking will help you to prepare your project and presentation. We have listed all the things you will need to do here:

Criteria	Point Allocation	Helpful hints on what to say and do!
1. Display well organised and neatly presented	2 points	Stand to side of the display so the judges can see it clearly
2. Clearly stated title, inquiry question and reasonable hypothesis	2 points	Introduce yourself, point to the title of your display and tell the judges why you chose to study this topic. State what your inquiry question was and tell them about your hypothesis. (what you thought would happen)
3. Clearly explained experimental procedures	3 points	Tell about your experiment, the steps you took to do it.
4. Measurable data that includes three or more trials.	3 points	Be sure to let them know you did the experiment at least three times and recorded your results to make sure your results were valid. Show them your tables and graphs where you have recorded your results.
5. Effective analysis of data clearly stating the experiment results (graphs, charts or tables	3 points	Explain what your data means. Make sure you can read your graphs and tables. Do your results support your hypothesis?
6. Use of scientific terms or topic vocabulary appropriate to year level	2 points	Make sure you sound like an expert on your topic and use science words, particularly from the scientific method like: problem, hypothesis, procedure, results & conclusion.
7. An appropriate conclusion based on the results was included	3 points	Let the judges know if you were right about your hypothesis. How could your experiment results help in real life? “My experiment about paper towel absorbency could help people save money by buying the most effective type of paper towel.”
8. Effective coverage and closure of presentation	2 point	Make sure you tell the judges everything about your experiment. If you get lost or forget where you are, look at your display and follow it piece by piece. This will help you to stay on track. When you are done, shake hands with the judges and thank them for their time.

Possible Total of 20 points

Remember to relax, smile and look the judges in the eyes when you speak to them. This will help you to feel and look confident. Remember, you are the expert on your topic and you had fun doing the project.

Upper Category- Years 5-6 What the Judges Look For

Lots of people are scared to talk to the judges. Just remember they are a fellow scientist and they really are just interested in hearing what you have to say about your project. Understanding what the judges will be looking will help you to prepare your project and presentation. We have listed all the things you will need to do here:

Criteria	Point Allocation	Helpful hints on what to say and do!
1. Display well organised and neatly presented	2 points	Stand to side of the display so the judges can see it clearly
2. Clearly stated title, inquiry question and reasonable hypothesis	2 points	Introduce yourself, point to the title of your display and tell the judges why you chose to study this topic. State what your inquiry question was and tell them about your hypothesis. (what you thought would happen)
3. Clearly explained experimental procedures	3 points	Tell about your experiment, the steps you took to do it.
4. Background information on science topic with at least 3 information sources cited	2 points	Talk about the sources (books, websites, and interviews) that helped you to understand your topic and come up with your inquiry question and the process of your experiment.
5. Measurable data that includes three or more trials.	3 points	Be sure to let them know you did the experiment at least three times and recorded your results to make sure your results were valid. Show them your tables and graphs where you have recorded your results.
6. Effective analysis of data clearly stating the experiment results(graphs, charts or tables)	3 points	Explain what your data means. Make sure you can read your graphs and tables. Do your results support your hypothesis?
7. Use of scientific terms or topic vocabulary appropriate to year level	3 points	Make sure you sound like an expert on your topic and use science words, particularly from the scientific method like: problem, hypothesis, procedure, results & conclusion.
8. An appropriate conclusion based on the results was included	3 points	Let the judges know if you were right about your hypothesis. How could your experiment results help in real life? “My experiment about paper towel absorbency could help people save money by buying the most effective type of paper towel.”
9. Stated real life connection	2 points	Judges love this because it gives real world purpose to your topic. It makes you sound like a real scientist! How would the results of your experiment affect something? For example, if you discovered that heat did affect the bounce of a tennis ball, what implications would this have for the users and manufacturers of tennis
10. Effective coverage and closure of presentation	2 points	Make sure you tell the judges everything about your experiment. If you get lost or forget where you are, look at your display and follow it piece by piece. This will help you to stay on track. When you are done, shake hands with the judges and thank them for their time.
	Possible Total of 25 points	

Science Fair Rules and Regulations

Awwww! You mean there are rules? Of course there are, silly, this competition is made and run by adults!

Safety Rules First

1. Number one rule… think safety first before you start. Make sure you have recruited your adult to help you.
2. Never eat or drink during an experiment and always keep your work area clean.
3. Wear protective goggles when doing any experiment that could lead to eye injury.
4. Do not touch, taste or inhale chemicals or chemical solutions.
5. Respect all life forms. Do not perform an experiment that will harm an animal or a human!
6. All experiments should be supervised by an adult!
7. Always wash your hands after doing the experiment, especially if you have been handling chemicals or animals.
8. Dispose of waste properly.
9. Use safety on the internet! Never write to anyone without an adult knowing about it. Be sure to let an adult know about what websites you will be visiting, or have them help you search.
10. If there are dangerous aspects of your experiment, like using sharp tools or experimenting with electricity, please have an adult help you or have them do the dangerous parts. That's what adults are for, so use them correctly. (Besides, it makes them feel important!)

Science Fair Rules

1. Only one student per entry and only one entry per student.
2. ***Adults can help; in fact we want them to get involved***. They can help gather materials, supervise your experiment and even help build the display. They just can't be with you during the judging.(So parents, no peeking!)If you have had help make sure you acknowledge this in your display.
3. Experiments are recommended over collections and models. You will not score very high unless you do an experiment, so save the models and collections for a class project. You will be judged on the use of the Scientific Method (we told you that on page 2).
4. You cannot perform the experiment live. You will only be judged on your presentation and board. You can however, mount things on your board in a type of 3D display, but remember that your board has to be able to stand by itself, so don't get carried away.
5. Displays must be on display boards or can be made with cardboard. They can be no larger than 100cm in height, 180 cm in length and 75cm deep. **They must stand alone.** See the display making page if you need a diagram.
6. Limit your presentation to a **maximum** of 5 minutes. Remember the judges will want to ask questions too.
7. Respect all adults involved in the fair… especially the judges!
8. All decisions of the judges and science fair committee are final.

If you completed everything in this packet you probably have a terrific science fair project, and you are now a real scientist! Good Job!

Useful Websites

Science Buddies

A great site that can help you discover what you are interested in and chose a topic for your science fair project.
http://www.sciencebuddies.org/science-fair-projects/project_ideas.shtml

Education .com

Education.com has assembled a collection of science fair project ideas written by science teachers, professional scientists, and educational consultants on popular science fair topics ranging from physics and chemistry to biology and even sociology. Free science fair ideas suitable for every grade level, be it preschool, kindergarten, elementary school, middle school, or high school.
http://www.education.com/science-fair/

All Science Fair Projects

Lots more ideas here for all year levels
http://www.all-science-fair-projects.com/category0.html

MashableAustralia

This site shows you some video footage of some brilliant science projects conducted by some special kids!
http://mashable.com/2014/08/26/science-projects-kids/

Neuroscience for Kids: Successful Science Fair Projects

Site made by Lynne Bleeker a former science teacher, science fair organizer, and judge. Gives a thorough and detailed description of the steps to a successful science fair project
http://faculty.washington.edu/chudler/fair.html

Science Kids

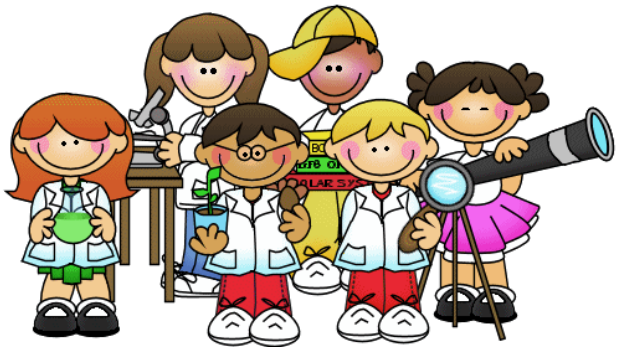
This site has some great ideas for science experiments and might give you some ideas for science fair projects.
http://www.sciencekids.co.nz/experiments.html

CSIRO- Do it yourself Science Experiments for kids

This site has some great ideas for experiments.
http://www.csiro.au/en/Education/DIY-science

Fizzics Education

A terrific site to explore. Contains some good ideas for experiments and ideas for science topics.
http://www.fizzicseducation.com.au/Free+experiments.html



Home Science Tools

Lots of project ideas and experiments.
http://www.hometrainingtools.com/a/science-projects

School Of Dragons

This site has lots of fun and easy experiments to interest your child in science.
http://www.schoolofdragons.com/how-to-train-your-dragon/science-experiments

Scholastic

Use videos of science experiments to teach basic concepts and spark students' interest in science.
http://www.scholastic.com/teachers/article/40-cool-science-experiments-web

25+ Totally Awesome Science Fair Projects

Great ideas here for junior students
http://www.icanteachmychild.com/science-fair-projects/

How to do a Science Fair Project

A video series to help you learn how to craft your own idea and see it through to completion.
http://www.jpl.nasa.gov/edu/teach/activity/how-to-do-a-science-fair-project/

Kids.gov

Lots of different sections to help with creating science fair projects.
https://kids.usa.gov/science/science-fair-projects/index.shtml

Science Bob

A list of science fair ideas, experiments and research help.
https://sciencebob.com/science-fair-ideas/ideas/