Guidelines for Science Fair Projects:

These guidelines will help you design and prepare your project.

Your project shows:

- Something related to science, mathematics or technology.
- Your own ideas and work.
- Creative, neat and careful work.
- Demonstration of the scientific method.

Your Display:

- Must include your question and hypothesis
- Must include your name, grade and exhibit number.
- Is limited to a 3 x 3 ft table area.
- Must be backed by a project display board.

Displays may not include:

- Science or math kits from stores.
- Expensive or non-replaceable personal property.
- Live Animals.
- Matches or Flames.
- Chemicals that are flammable or otherwise dangerous.
- Batteries that work for long periods of time. *(electricity projects should use momentary switches or other types that automatically turn off when you let go of them.)*
- Electricity passing through un-insulated wire.
- Uncontained messes.
- Anything that would have to be plugged into a school electrical outlet.

Please Note:

- Any major changes to your Science Fair Project should be discussed with your teacher.
- Experiments that may cause harm to yourself or others are not appropriate and will not be approved by your teacher.

Getting Started/Planning Sheet

Framing the Investigation:
What am I curious about? Why do I want to know about this project?

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Determine Your Question

- A successful project begins with a well thought out question. The question should not be answered by a simple yes or no. For example, *How does salt affect the freezing point of water?* Is better than *Does salt affect the freezing point of water?*
- Good scientific inquiry questions do not include taste, smell and opinion based responses.
- Good scientific inquiry questions have one variable and collectable data you can measure.
- If you can repeat the experiment several times, you will have more data to work with and your conclusion will be more accurate.

My Question-Rough Draft:

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Can you answer **YES** to the following questions?

1. Is my question something I can **investigate**? **YES/NO**
2. Will I have to **collect and record** data in my investigation? **YES/NO**
3. Will I be able to **repeat** my investigation several times? **YES/NO**
4. Is there **one thing to measure** (how long, how much, how hot, how tall, etc)? **YES/NO**
5. Is there **only one thing I will change (variable)** when I do my experiment? **YES/NO**

Sample Questions	**Variable**	**Thing to measure**
How does the temperature affect the amount of foam when root beer is poured?	Temperature	Height of foam
How does the weight of a toy ball affect the speed that it rolls down a school slide?	Ball weight	Time to get down slide
At what rate will different liquids dissolve a piece of chalk?	Type of liquid	Time to dissolve chalk

What paper bridge design holds the most weight?	Paper bridge design	Weight at collapse
How does the length of a pendulum affect how many swings it makes in 30 seconds?	Length of pendulum string	Number of swings
How do different amounts of salt affect the temperature at which water boils?	Amount of salt	Boiling temperature
Which type of soil soaks up water faster?	Type of soil	Amount of water
Which color of gelatin melts the fastest?	Color of gelatin	Melting time

Revised Question (As it will appear on my display board):

_____

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Hypothesis: A prediction about what I think will happen. *The hypothesis gives you a general guide as to what to expect from the experiment and does not need to be correct.*

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Project Planning: What method and materials do I need to conduct my investigation? What will my investigation look like? How much time will I need? What is my variable *(the one thing you will change)*?

What materials do I need?

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Timeline: When do I do what?

Procedure:

How did I perform this experiment? What materials did I use? What was my variable?

Results: What happened? *Results are graphs, charts, and tables of data you collected from your experiment. Results can also include photographs and drawings of various stages in your experiment. When explaining your results, be sure to show how they relate to your hypothesis; and whether your hypothesis was right or wrong.*

Conclusion: What did I find out and how does it compare with what I thought would happen? What did you learn? What could you do next time?