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# Advice to Students Doing a Science Fair Projects

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**Your PROJECT must  
be an EXPERIMENT  
(Cause-----> Effect)**

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**There must be a logical  
reason to suspect a....**

*“Cause -----> Effect”*

**Connection**

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**Your project need not  
solve a cultural, social or  
economic problem;**

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**Your project need not solve a  
cultural, social or economic  
problem;  
it just needs to be GOOD  
Science.**

# Ideas????

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*“Ideas are like rabbits. You get a couple and learn how to handle them, and pretty soon you have a dozen.”*

**- John Steinbeck -**

# Ideas????

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**Rarely are experiments  
utterly unique....**

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previously done research...**

**... another organism (avoid vert's)**

**... a different variable**

**... a different field site**

**... a new or modified method**

# Ideas????

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One must

**READ!!!!**

# READing...YES!

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... there's a need to see  
how professionals  
*ask* and *look at*  
questions

# READing...what??

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... *articles* better than  
books....

# READing...what??

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... *articles* better than books...

UT's *Quest*

Science News

Scientific American

# READing...what??

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... *articles* better than books...

*Quest & Science News*

Scientific American

(old is sometimes better)

# READing...what??

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... *articles* better than books...

Scientific American

(look for ...

*The Amateur Scientist*)

# READing...what??

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**Journals** are the best...

...especially for life science

'cuz they got **methods...**

....go to **SDSU, UCSD...SIO**

# READing...what??

**Masters Theses are**  
the very best...

...especially for life science

‘cuz they got **methods...**

...go to **SDSU, UCSD...SIO**

# Other Points

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- **The data must be quantitative (NUMBERS)**
- **The units must be METRIC.**
- **50-200 hours of lab work is typical.**
- **You must have both a detailed **NOTEBOOK** and **BACKBOARD.****

# Enhancements:

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**1) creativity/cleverness of the idea or method;**

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- 1) creativity/cleverness of the idea or method;**
- 2) special skills or technique  
(making ones own equipment)**
- 3) thoroughness of the study**
- 4) relevance/profoundness  
of the work**