

**2008: SF: GETTING THE IDEA**

Name: \_\_\_\_\_

**CHECKLIST #1: DECIDING ON A PROJECT This is Due This Friday in class. If you're absent it must be emailed**

A science fair project! What to do??? Do I have to find a cure for cancer? A way to end pollution? An endless supply of inexpensive electricity? HELP! WHOA!! Quit biting your nails! You're not expected to win a Nobel Prize with your very first project (that can wait a year or two!) What are you expected to do? Well, first of all, you've got to select a topic. And, how, you ask, do you do that? Checklist #1 should help. All you have to do is fill in the blanks.

LIST 10 THINGS YOU ARE INTERESTED IN: (examples: playing the piano, football, computers, people watching, plants, chemistry, skateboards, animals, photography) OR, THINGS YOU HAVE WONDEREDED ABOUT: (examples: is black print easier to read than blue? Do brown eggs have more cholesterol than white? Would a helicopter fly better if it had more blades? What care do computer disks really need? Which fishing line is the strongest?)

- |          |           |
|----------|-----------|
| 1. _____ | 2. _____  |
| 3. _____ | 4. _____  |
| 5. _____ | 6. _____  |
| 7. _____ | 8. _____  |
| 9. _____ | 10. _____ |

Now, pick the four most interesting topics above and ask yourself 5 questions about each one... questions you'd really like to know the answers to. For example, let's say you really like football. Your questions might include, "Can I write a computer program to predict the outcome of this year's NFL games?" "Would young players learn faster if the coach used a computer to diagram plays?" "Do Pac-Man whizzes make better passers?" Or, getting away from computers, "Do players with thicker necks suffer fewer injuries?" "Does artificial turf produce more touchdowns?" "What is the relationship between body fat and running speed?" Get the idea?? OK, before you start on your questions, read through this list of banned projects below.

**SCIENCE FAIR PROJECTS TO AVOID: these will NOT be accepted**

- Survey projects (opinion sampling, product use, etc. An in-depth questionnaire that probes into factors affecting opinions – and is thoroughly correlated – may stand on its own as a project or may be used as a preliminary step in behavioral studies.)
- Models (volcanoes, solar panels, electric circuits...) AND Demos (how a battery works...)
- Anything in violation of animal or other Fair regulations (tobacco, explosives, rocket fuel, etc.)
- Projects with small sample sizes (or ones where it would be IMPOSSIBLE to do a lot of tests/trials)
- Illogical or "Who Cares?" tests – e.g. effect of rum on plant growth
- Projects in which the results are common knowledge
- Kit building, e.g. Radio Shack or Heathkits
- Projects which duplicate standard class/text experiments
- Collections, e.g. minerals
- Anything with purely subjective measurements or preferences
- Product testing projects (which is best?) that lack science

**PROJECTS UNLIKELY TO BE ACCEPTED: these are either extremely common, too easy, or too hard**

- |  |   |
|--|---|
| Effect of colored light, music, talking (etc etc) on plants (or anything else) | Reaction times  |
| Effect of caffeine, smells, music on test scores, school work                  | Most male/female comparisons                            |
| Mold or crystal growth   | Basic planarian re-growth                               |
| Effect of Coke, coffee, etc. on teeth  | Detergents vs. stains                                   |
| Effect of running, music, video games, etc. on blood pressure                  | Basic flight tests, e.g. planes, rockets                |
| Do we eat balanced diets?  | Battery life projects of the plug in and run down type  |
| Strength/absorbency of paper towels  | Basic popcorn volume tests                              |
| Astrology  | Basic flower preservation techniques                    |
| ESP, especially standard card test   | Child-resistant caps tested on kids (arthritics, maybe) |
| Basic maze runnin  | Sleep learning  |
| Effect of color on memory, emotion, mood, taste, strength, etc.                | Taste or paw-preferences of cats, dogs, etc.            |
| Optical Illusions  | Ball bounce tests with poor measurement techniques      |

**HINTS:**

- Be realistic about the amount of time you have. You only have the month of November to run your experiment. Choosing a botany (plant) project may not be the wisest decision with our tight schedule.
- Be realistic about your resources. "Can I get my hands on a nuclear reactor by November?"
- Keep this question in the back of your mind... "HOW AM I GOING TO TEST THIS?"

OK, now that you know what projects you don't want to do, copy your 4 favorite topics down below. For each one, develop 5 thoughtful, fascinating questions and record them below. **BE SURE TO READ "PROJECTS TO AVOID!!!"**

WRITE NEATLY SO I CAN READ THESE IDEAS (Thanks!):

Topic #1: \_\_\_\_\_ My 5 questions about this topic are:

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_

Topic #2: \_\_\_\_\_ My 5 questions about this topic are:

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_

Topic #3: \_\_\_\_\_ My 5 questions about this topic are:

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_

Topic #4: \_\_\_\_\_ My 5 questions about this topic are:

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_

**SCIENCE FAIR IDEA BANKS**

(use to help create your OWN idea, not to steal one)

- <http://www.all-science-fair-projects.com/>
- <http://pbskids.org/dragonflytv/scifair/index.html>
- <http://www.cool-science-projects.com/index.html>
- <http://www.cdli.ca/sciencefairs/intermed.html>
- <http://www.scifair.org/projects/>

**ADDITIONAL SCIENCE FAIR GUIDES**

Science Buddies SF Guide:  
[http://www.sciencebuddies.org/mentoring/project\\_guide\\_index.shtml](http://www.sciencebuddies.org/mentoring/project_guide_index.shtml)

Lakewood Public Library Guide:  
<http://www.lkwdpl.org/study/sfair/>

Another science teacher's take on SF:  
[http://www.ri.net/schools/East\\_Greenwich/Cole/sciencefair.html](http://www.ri.net/schools/East_Greenwich/Cole/sciencefair.html)

**IMPORTANT SCIENCE FAIR WEBSITES**

- San Diego Science Fair: <http://www.gsdsef.org>
- California State Science Fair: <http://www.usc.edu/CSSF/>
- Discovery Channel's Science Fair Central:  
<http://www.school.discovery.com/sciencefaircentral>
- Mrs. Gillum's SF site: <http://mrs.gillumscience.com>
- Ms. Wiggin's SF site: <http://erinwiggin.com/sciencefair.html>

**SEARCH ENGINES FOR RESEARCH PAPER**

- <http://www.dogpile.com>
- <http://www.yahoo.com>
- <http://www.ajkids.com>
- <http://www.yahooligans.com>
- <http://www.educationworld.com>
- <http://www.infoplease.com>
- <http://www.vlib.org/Science.html>
- <http://www.google.com>