

JUDGING CRITERIA
USED IN THE DELAWARE VALLEY SCIENCE FAIR

What are we Judging?

You are judging the quality of work done on a student research project in science, mathematics or engineering. The project must involve laboratory, field or theoretical work, not only library research. The project should have a clear hypothesis, research plan and conclusion. The display is of lesser importance. The project should be compared with other projects in the same category and Fair only.

CRITERIA

Priority is to be given to Creative Ability, Scientific thought or Engineering goals. Thoroughness, skill and clarity should also be considered. The following weights are given as a guide, but **your decisions will be by consensus of your panel of judges.**

Creative ability.....	30%
Scientific thought/Engineering goals.....	30%
Thoroughness.....	15%
Skill.....	15%
Clarity.....	10%

CREATIVE ABILITY

Does the project show creative ability and originality in

- * the questions asked?
- * the approach to answering the question?
- * the collection and analysis of the data?
- * the interpretation of the data?
- * the use of instruments?
- * the design or construction of new instruments?

SCIENTIFIC THOUGHT

- * Was the question clearly stated?
- * Was the question sufficiently limited to allow plausible attack?
- * Was there an organized procedure for obtaining results?
- * Were the variables clearly recognized and defined?
- * If controls were needed, were they correctly used?
- * Were there adequate data to support the conclusion?
- * Does the student recognize the data's limitations?
- * Does the student understand the project's ties to related research?
- * Does the student have an idea of what further research is warranted?
- * Did the student cite scientific literature, or popular literature?

ENGINEERING GOALS (for appropriate projects)

- * Does the project have a clear objective? Is it relevant to a potential user's needs?
- * Is the solution workable? Economically feasible?
- * Does the solution represent a significant improvement over previous alternatives?

- * Has it been tested for performance under the conditions of use?

THOROUGHNESS

- * Was the purpose carried out to completion within the scope of the original intent?
- * Were observations repeated, if appropriate?
- * How completely was the problem covered?
- * How complete are the project notes and original data?
- * Is the student aware of other approaches or theories concerning the project?
- * Is the student familiar with the scientific literature in the studied field?

SKILL

- * Does the student have the required laboratory, computational, observational and design skills to obtain supporting data?
- * Where was the project done? What assistance did the student receive from parents, teachers, scientists or engineers?
(Work in a special facility **is** appropriate, however you will be assessed regarding your skills used.)
- * Did the student use, build, design special equipment or procedures as opposed to having others do this for them?
- * Is the display well designed and constructed?

CLARITY

- * How clearly can the student discuss the project and explain the project's purpose, procedures and conclusions?
(Be alert to rote presentations that reflect little understanding of principles.)
- * Are the important phases of the project presented in an orderly fashion?
- * How clearly are the data and results presented?
- * How well does the display explain itself? Does it attract attention?
- * What parts of the display were created by the student? What parts were designed or created by others?

TEAMWORK. (Group Projects only)

- * Are the tasks and contributions of each team member clearly outlined?
- * Was each team Member fully involved with the project? Is each familiar with all aspects?
- * Does the final work reflect the coordinated efforts of all team members?