

SARSEF SCIENCE
Judging Guidelines for Gr. 3-5

The following evaluation criteria will be used for judging at SARSEF. This may assist you in evaluating each of these categories, however, the points are provided as guidelines only. Each section includes key items to consider.

I. Research Question (15 pts.)

- clear and focused purpose
- states what is the question/problem that needs solving in their life, community, world?
- follows rules, gets permission, question is testable using scientific process
- the answer is not already obvious or out there if a simple search is conducted
- is reasonable, follows safety rules, asks for and receives appropriate permission

II. Design and Methodology (25 pts.)

- has a step by step plan and data collection methods that are consistent
- has a test group and a control group (if appropriate), or multiple groups for testing
- identification of variables that cannot be controlled but could affect the results
- clearly written, numbered step by step plan to follow so other could do the same test
- considered the appropriate # of subjects, adequate # of trials are planned

III. Execution: Data Collection, Analysis and Interpretation (25 pts.)

- followed same planned method/process each time - not too much variation
- enough data collected to reasonably answer question, allow for analysis of data
- appropriate application of mathematical methods for comparison – use of fractions, averaging
- forms a conclusions based on the data and evidence, refers to data
- recognition of potential impact of what was done
- refers back to the original question or problem, ideas for further research
- include what challenges were presented, can say what they wish they could do next time

IV. Creativity (20 pts.)

A creative project demonstrates imagination and inventiveness. Such projects are ones that the student personally cares about, have not been done hundreds of times before or frequently listed in Science Fair idea books or web.

- project demonstrates particular creativity in one or more Criteria I, II, III or V
- idea appears novel – at least to the student (not almost the same or seen repeatedly)
- idea appears to be something that student genuinely cares about, passion or enthusiasm is communicated

V. Poster Board (15 pts.)

- understanding of basic science relevant to project, evidence of process that was followed
- colorful, creative and logical organization of display (handwritten is still acceptable)
- graphics (photo or drawing) including a basic graph of some kind
- extra points for mentioning references, supporting documentation listed on board or notebook

SARSEF ENGINEERING

Judging Guidelines Gr. 3-5

The following evaluation criteria will be used for judging at SARSEF. This may assist you in evaluating each of these categories, however, the points are provided as guidelines only. Each section includes key items to consider.

I. Research Problem (15 pts.)

- project has a clear and focused purpose
- states what is the question/problem that needs solving in their life, community, world?
- the answer is not already obvious or out there if a simple search is conducted
- is reasonable, follows rules, asks for and receives appropriate safety precautions
- definition of criteria for proposed solution, limitations

II. Design and Methodology (25 pts.)

- exploration of several alternatives to answer an actual need/problem
- identification of a possible solution that is practical, reasonable, doable
- realistic plan for development of an actual prototype/model for testing
- step by step plan and consistent data collection methods
- recognition that there are variables that may NOT have been anticipated but could affect the results
- plans appropriate # of models, adequate # of planned trials and retrials

III. Execution: Construction and Testing (25 pts.)

- prototype actually demonstrates the intended design or variation
- prototype was tested in more than one condition, and in multiple trials
- followed the plan for testing, not too much variation in conditions, tried to do the same thing each time
- documents changes made based on results
- forms final conclusions based on the data
- can say what they wish they could do next time, may include what challenges were presented

IV. Creativity (20 pts.)

A creative project demonstrates imagination and inventiveness. Such projects are ones that the student personally cares about, have not been done hundreds of times before or frequently listed in Science Fair idea books or web.

- project demonstrates significant creativity in one or more Criteria I, II, III or V
- idea appears novel – at least to the student (not almost the same or seen repeatedly)
- idea appears to be something that student cares about, passion and enthusiasm is communicated

V. Poster Board (15 pts.)

- clear communication of basic engineering design relevant to overall project
- colorful, creative and logical organization of display (handwritten is still acceptable)
- graphics (photo or drawing) including a basic graph or chart of some kind
- extra points for references mentioned, listed on board or in notebook