



ACT-SO GUIDELINES

Biology / Microbiology

The science of life or of the origin, structure, reproduction, growth and development of living organisms collectively.

Projects in this category could involve the biology of organisms from the macroscopic scale to the microscopic scale (e.g., bacteria, viruses, protozoa, fungi, yeast, genes, etc.)

Requirements

1. Only one (1) project can be entered per area
2. Six (6) copies of a typed 8-½ inch by 11 inch, double-spaced scientific paper must accompany the project to be submitted. The content of the paper, which should not exceed five (5) pages, should include: a short introduction describing the background and purpose of the work, an experimental section including both methods and results, and a concluding section discussing the results and their implications. Tables, graphs, charts, maps, photographs, raw statistical data, etc. should be included whenever possible. They must also include references used and acknowledgements of any individuals who served as direct academic resources. The student's name, page number and unit name and number must be on the top of each

page. Six (6) copies of the supporting documents, as well as the six copies of the paper must be submitted on or before the specified deadline.

3. The contestant is to make an oral presentation explaining his or her project. The oral presentation should not exceed five (5) minutes. This time limit does not include the time required for the judges to ask question and for the contestant to respond to the judges' questions.
4. Contestants are responsible for providing their own equipment
5. The NAACP ACT-SO Program will provide electrical power and display tables
6. Contestants must submit a Science Verification Form from a qualified scientist or science teacher with an earned professional degree or license. This person can also serve as a coach, working closely with the student during the course of the project to ensure the accuracy of the student's research and qualifications for entry.

Scientific Projects will be judged by the following criteria:

- **Quality of Research (40 pts)**
 1. Scientific Approach/Method
 2. Validity of Information
 3. Validity of Conclusion(s)

- **Depth of Understanding (40 pts)**
 1. Oral Presentation
 2. Knowledge Gained and Creativity
 3. Thoroughness
 4. Individual Work

- **Written Report (10 pts)**
- **Visual Presentation (10 pts)**

100 Total