2018 LOUISIANA REGION 5 SCIENCE & ENGINEERING FAIR OFFICIAL JUDGING SHEET

Assigned To:

Jr. Animal Sciences	Sr. Animal Sciences
Jr. Behavioral & Social Sciences	Sr. Behavioral & Social Sciences
Jr. Biochemistry	Sr. Biochemistry
Jr. Biomedical & Health Sciences	Sr. Biomedical & Health Sciences
Jr. Cellular & Molecular Biology	Sr. Cellular & Molecular Biology
Jr. Chemistry	Sr. Chemistry
Jr. Computational Biology &	Sr. Computational Biology &
Bioinformatics	Bioinformatics
Jr. Earth & Environmental Sciences	Sr. Earth & Environmental Sciences
Jr. Embedded Systems	Sr. Embedded Systems
Jr. Energy: Chemical	Sr. Energy: Chemical
Jr. Energy: Physical	Sr. Energy: Physical
Jr. Engineering Mechanics	Sr. Engineering Mechanics
Jr. Environmental Engineering	Sr. Environmental Engineering
Jr. Materials Science	Sr. Materials Science
Jr. Mathematics	Sr. Mathematics
Jr. Microbiology	Sr. Microbiology
Jr. Physics & Astronomy	Sr. Physics & Astronomy
Jr. Plant Sciences	Sr. Plant Sciences
Jr. Robotics & Intelligent Machines	Sr. Robotics & Intelligent Machines
Jr. Systems Software	Sr. Systems Software
	Jr. Animal Sciences Jr. Behavioral & Social Sciences Jr. Biochemistry Jr. Biomedical & Health Sciences Jr. Cellular & Molecular Biology Jr. Chemistry Jr. Computational Biology & Bioinformatics Jr. Computational Biology & Bioinformatics Jr. Earth & Environmental Sciences Jr. Embedded Systems Jr. Energy: Chemical Jr. Energy: Physical Jr. Energy: Physical Jr. Engineering Mechanics Jr. Environmental Engineering Jr. Materials Science Jr. Mathematics Jr. Microbiology Jr. Physics & Astronomy Jr. Plant Sciences Jr. Robotics & Intelligent Machines Jr. Systems Software

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Project Number	<u>Creative</u> <u>Ability</u> 30 %	Sci. Thought – Eng. Goals 30 %	Thoroughness <u>15%</u>	<u>Skill</u> <u>15%</u>	<u>Clarity</u> <u>10%</u>	<u>Total</u>	
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I. Creative Ability (30%)

- 1. Does the project show creative ability and originality in the questions asked?
- 2. Creative research should support an investigation and help answer a question in an original way.
- 3. A creative contribution promotes an efficient and reliable method for solving a problem. When evaluating projects, it is important to distinguish between gadgeteering and ingenuity.

II. Scientific Thought (30%)

If an engineering project, the more appropriate questions are those found in IIb. Engineering Goals

- 1. Is the problem stated clearly and unambiguously?
- 2. Was the problem sufficiently limited to allow plausible approach?
- 3. Was there a procedural plan for obtaining a solution?
- 4. are the variables clearly recognized and defined?
- 5. If controls were necessary, did the student recognize their need and were they correctly used?
- 6. Are there adequate data to support the conclusions?
- 7. Does the finalist or team recognize the data's limitations?
- 8. Does the finalist or team understand the project's ties to related research?
- 9. Does the finalist or team have an idea of what further research is warranted?
- 10. Did the finalist/team cite scientific literature, or only popular literature?

II b. Engineering Goals (30%)

- 1. Does the project have a clear objective?
- 2. Is the objective relevant to the potential user's needs?
- 3. Is the solution workable? Acceptable to the potential user? Economically feasible?
- 4. Could the solution be utilized successfully in design or construction of an end project?
- 5. Is the solution a significant improvement over previous alternatives?
- 6. Has the solution been tested for performance under the conditions of use?

III. Thoroughness (15%)

- 1. Was the purpose carried out to completion within the scope of the original intent?
- 2. How completely was the problem covered?
- 3. Are the conclusions based on a single experiment or replication?
- 4. How complete are the project notes?
- 5. Is the finalist/team aware of other approaches or theories?
- 6. How much time did the finalist or team spend on the project?
- 7. Is the finalist or team familiar with scientific literature in the studied field?

IV. Skill (15%)

- 1. Does the finalist/team have the required lab, computation, and design shills to obtain data?
- 2. Where was the project performed? What kind of assistance did the student receive?
- 3. Where did the equipment come from? Was it built, loaned, or part of a laboratory?

V. Clarity (10%)

- 1. How does the student discuss the project and explain the purpose, procedure and conclusions?
- 2. Does the written material reflect the student's understanding of the research?
- 3. Are the important phases of the project presented in an orderly manner?
- 4. Is the data and results presented clearly? Does the project display explain the project?