Section J – STEM (Science, Technology, Engineering & Mathematics)

General Information – Pertains to JA through JF

- Articles in this section must be made and selected according to standards from project curriculum, State 4-H Club Management and Volunteer Leader Handbook plus CCE Risk Management Guidelines.
- Articles in this section must have been made and selected during the current project year.
- If power tools are used by youth in making projects, youth must be 12 years or older.
- Up to two articles per class per member may be entered (Sections JA, JB and JC, Classes 1 and 2)
- For construction project, with manufactured components see Section JC

Section JF – SCIENCE EXPERIMENTS AND EXHIBITS

Individuals and groups are encouraged to enter exhibits/displays emphasizing what they learned and experienced in learning about science concepts in areas of agriculture, human ecology, life or physical sciences. Any type or combination of science projects along with creativity is encouraged.

Class No.

1. Experiments: Describe your hypothesis (what you think will happen); describe the procedures you performed; describe the observations you made and what conclusions you drew from your experiment; include photos or drawings and samples (if possible) from your experiment. Use display board or poster board for display. Include experiment description, introduction, hypothesis, methods, results and your conclusions.

2. Public Service/Civic Engagement Projects: Exhibits can be of any public service or public education activity you took part in that had a scientific component. Examples may include watershed rehabilitation, recycling programs and educational models. Project exhibit posters/display must be clearly labeled with a written statement of what the project is, how it relates to science and why you are interested in the project.

3. Descriptive Science: Science projects that are not experiments and service projects but do consist of systematic observations and tell us about the natural world. Exhibit could show summaries of what you observed (ex: how the local bird population changes with the seasons, where flies like to breed in a barn, how many bites of food different animals eat per minute). Could present collections and classifications of materials which display physical or biological articles.

4. Citizen Science: is the engagement of public participants in real-world scientific collaborations – asking questions, collecting data, and/or interpreting results. A display or record of participation in a Citizen Science project, could be part of a local, regional, national or international project, but needs to include some kind of connection to scientists, researchers, or, policy makers and contribute to scientific knowledge that will be put to some type of use (by researcher, policy makers, etc.) Examples include: Wasp Watchers, Project Feeder Watch, eBird, Lost Ladybug, Adopt a Pixel, Nature's Notebook, or a local project. For more information: http://www.birds.cornell.edu/citscitoolkit/contexts/youth-development/4-h/