******Parent and Student Information**

***Congratulations! Your student is about to embark on a journey of discovery! Here are a few guidelines to consider when choosing a topic, conducting an experiment, and creating a display for a science and engineering fair project.***

**CHOOSING A TOPIC**

**Do……** **Don’t…..**

**Choose original, unique and interesting topic(s).** **Plagiarize.**

**Make sure the question is testable.** **Choose models of already observed phenomena.**

**Determine a testable hypothesis**. **Choose cookie cutter experiments.**

**Assess what paperwork is needed.** **Wait until the last minute.**

**DESIGNING AN EXPERIMENT**

 **Do…… Don’t…..**

**Fill out all appropriate paperwork prior to** **Begin experiment before paperwork is done!**

**experimentation.** **Choose experimental designs that are too costly.**

**Follow Research Plan Design.** **Leave out any steps, no matter how small.**

**Be very detailed and exact.**  **Forget to repeat the experiment or have multiple**

**Be sure to have a control.** **trials.**

**Assess the cost before you begin.** **Change the experiment because it is not working**

**Repeat! Repeat! Repeat! without explanation.**

**Determine a method of data collection**. **Forget to take pictures**

**RECORDING RESULTS, ANALYZING DATA**

**Do……** **Don’t……**

**Record data in a table or chart.** **Forget to label all tables, charts and graphs.**

**Graph results (For example: averages, %’s, etc.)** **Cite all pictures, tables, charts, and graphs.**

**Use software (Excel)** **Forget to discuss relationships in the data.**

**Give a written discussion of the results.**

[**www.sciencefair.msstate.edu**](http://www.sciencefair.msstate.edu) **Region V MSEF Director, Dr. Tina Gibson**

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**DEVELOPING CONCLUSION**

**Do…… Don’t……**

**Restate main question or problem. Forget to focus on the positive.**

**Did the experiment answer the question? Be lengthy**

**Were there any errors or problems?**

**What did you do to solve them?**

**How could you further this experiment?**

**DESIGNING A DISPLAY BOARD**

 **Must include: Important Information**

**Title Don’t forget to cite origin of pictures, no faces**

**Question or Problem Display Board should read from left to right.**

**Hypothesis or Goal Display should fit in a three foot space**

**Experimental Design (Material and Procedures) Use your own pictures/don’t copy and paste**

**Tables, Charts, and or Graphs Include impact of project on society.**

**Written Explanation of Results (Discussion) Cite… “pictures/graphs created by**

**Conclusion student name using *device/software*.”**

**Resources or Works Cited**

**TITLE**

**Question Discussion of Results**

 **Pictures, Charts, Graphs with explanations**

**Hypothesis**

**Experimental Design Conclusion**

 **Materials**

 **Procedures**

 **References/citations**

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