



MISSISSIPPI STATE UNIVERSITY™
JAMES WORTH
BAGLEY
COLLEGE OF ENGINEERING

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.....

Choose original, unique and interesting topic(s).
Make sure the question is testable.
Determine a testable hypothesis.
Assess what paperwork is needed.

Don't.....

Plagiarize.
Choose models of already observed phenomena.
Choose cookie cutter experiments.
Wait until the last minute.

DESIGNING AN EXPERIMENT

Do.....

Fill out all appropriate paperwork prior to experimentation.
Follow Research Plan Design.
Be very detailed and exact.
Be sure to have a control.
Assess the cost before you begin.
Repeat! Repeat! Repeat!
Determine a method of data collection.

Don't.....

Begin experiment before paperwork is done!
Choose experimental designs that are too costly.
Leave out any steps, no matter how small.
Forget to repeat the experiment or have multiple trials.
Change the experiment because it is not working without explanation.
Forget to take pictures

RECORDING RESULTS, ANALYZING DATA

Do.....

Record data in a table or chart.
Graph results (For example: averages, %'s, etc.)
Use software (Excel)
Give a written discussion of the results.

Don't.....

Forget to label all tables, charts and graphs.
Cite all pictures, tables, charts, and graphs.
Forget to discuss relationships in the data.

DEVELOPING CONCLUSION

Do.....

Restate main question or problem.

Did the experiment answer the question?

Were there any errors or problems?

What did you do to solve them?

How could you further this experiment?

Don't.....

Forget to focus on the positive.

Be lengthy

DESIGNING A DISPLAY BOARD

Must include:

Title

Question or Problem

Hypothesis or Goal

Experimental Design (Material and Procedures)

Tables, Charts, and or Graphs

Written Explanation of Results (Discussion)

Conclusion

Resources or Works Cited

Important Information

Don't forget to cite origin of pictures, no faces

Display Board should read from left to right.

Display should fit in a three foot space

Use your own pictures/don't copy and paste

Include impact of project on society.

Cite... "pictures/graphs created by
student name using device/software."

Question	TITLE	Discussion of Results
	Pictures, Charts, Graphs with explanations	
Hypothesis		
Experimental Design Materials Procedures		Conclusion
		References/citations