6-12 Science Fair Guidelines

• What is a CAVA Science Fair?
  Our science fair is an exciting way for our students to display their scientific inquiries! We will display your experiments and their results at Science Fair events across the state as well as online for the whole school to see!

• How do I begin?
  Begin by looking into a topic that interests you. Any questions that come up, write them down. If there is a question that you can test to find an answer, you may use this to do an experiment. For example, you may be interested in magnetism. As you explore different types of magnets, you notice that certain magnets, perhaps the thicker ones, seem to have a stronger pull. You wonder if the thickness of the magnet always creates a stronger magnetic pull. You can conduct an experiment to measure how the thickness of a magnet affects its pull.

• What needs to be included?
  • On the Display Board
    o Title - choose a catchy title
    o Question - what are you trying to find out?
    o Hypothesis - what do you think will happen?
    o Procedure - detailed, step by step description of how your experiment was performed
    o Data - diagrams, charts, graphs or photos displaying the results of your experiments (the experiment must be performed at least three times!)
    o Conclusion - what is the answer to the original question, based on your data
    o Student and teacher name - on BACK of board
  • With the display board
    o Abstract - a brief (no more than one page, double-spaced) overview of the project; should include the title, the question, the hypothesis, a brief description of the procedure, and the results.
    o Model or Materials - you may display the items used in your experiment along with your display board - this is best practice, but not always practical. Photos are acceptable substitutes.
- Notebook – Kept throughout experiment process
  - Abstract - (same as the one on the display board)
  - Title Page- Student’s name and Teacher name should only appear in the Science Notebook and on the back of the project display board
  - Table of Contents
  - Problem, Hypothesis, Procedure and Materials
  - Research Report - minimum 5 paragraphs on topic; footnotes or references required; this is not a report on your experiment, but research on your topic of choice
  - Data Log - results from experiment
  - Graphs and Data Tables or photographs of results
  - Conclusion - (same as the display board)
  - Annotated Bibliography

- Judging: You will be judged on the following components using a rubric for your grade level.
  - Display Board: Are all the required components present? Is it easy to follow and well designed?
  - Experiment: Is it student centered? Did you follow the scientific method?
  - Presentation: Did you present? Were you able to speak about your experiment in a way that showed the judges you really knew the project well?

- Can my parents help?
  Your parents can help by giving advice in preparing the display, taking you shopping for the required materials, taking pictures, and assisting you in any research that you conduct. The project and experiment should be completed by you. All work completed by parent should be labeled as such and parent role should be described in the project notebook.

- Suggested timeline:
  - Now - Beginning of November
    - Identify topic - what is an area that interests you?
    - Identify question - what do you want to find out?
    - Develop hypothesis - what do you think will happen?
  - The month of November and beginning of December:
    - Develop procedure - what will you do for your experiment?
- Obtain materials – what will you need to conduct your experiment?
  - The month of December (winter break is a great time!)
    - Conduct your experiment
    - Record your data
  - The month of January
    - Organize your data into charts or graphs
    - Analyze your data – what does it mean?
    - Write your conclusion – was your hypothesis right or wrong? Why?
  - First couple weeks of February
    - Write your abstract and complete research report
  - Last couple weeks of February
    - Complete your display board
  - The month of March (depending on location)
    - Display your project at Science Fair Event
  - Winners will be announced mid-April