SCIENCE PROJECT COMPONENTS

PROBLEM: State the problem to be solved in the form of a question.

RESEARCH: Find and review the current scientific knowledge about this topic from various resources.

HYPOTHESIS: Write an **if (cause)... then (effect)...** statement of what you think will happen. This is an educated guess based on research.

MATERIALS: Make a list of the materials and how much of each item you will use in your investigation.

PROCEDURE: Make a list of the step-by-step directions of what you will do and in the order of how you did your work.

EXPERIMENTAL DESIGN: Tell what you changed and what happened based on the changes you made.

Variables include:

- **Independent:** What you changed (type of fertilizer)
- **Dependent:** What happened based on what you changed (the height of the plants is affected)
- **Constants:** What stays the same (amount of water, light, fertilizer, and time to grow; consistent measuring tool and units of measure)
- **Control:** Nothing changed (grow a plant without any fertilizer)

DATA COLLECTED: Write good, detailed observations often. Take accurate measurements. Organize the data into tables and charts.

RESULTS: Analyze your data. Think about the evidence you collected. Explain how your findings answer your question stated in the problem. Create a graph to show your results. Also, draw pictures, diagrams or take photos to show your results.

CONCLUSION: Compare your results to your hypothesis. Explain why you think the results happened and what you learned. Support or refute your hypothesis.