Mrs. Hidalgo's 5th Grade Class
FUTURE FARM

Research Question: Which bean seed will show the most growth, in the two-three week Future Farm growth lab? On a more global level, how can this growing experiment connect to solving world hunger issues (For example, could this type of growth be extremely beneficial in areas where there is no fertile soil, severe drought, etc.) How does this experiment connect to our studies on sustainability?

Hypothesis: I think the _____will show the most growth in our Future Farm growth lab.

Experimental Design:
- Variables: The Bean Seed
- Control: The other Future Farm materials (List will be included for presentation)
- Observation: Each group will set up a Future Farm and make daily observations, both written and illustrated
- Collect Data: Examples of data are values in Ph, temperature, a measurement of growth, color, distance, etc.
- Journal: Entries must be written clearly and with detail of description so that another scientist can read the journal, simulate the conditions of the experiment, and repeat the experiment exactly.
- Data: The data are the values written down as the experiment progresses. Examples of data entry on measuring plant growth:
  Group #1: Seed-Day-Observation (Illustrated)-Measured Growth-Personal Thoughts and Ideas
- Charts & Graphs:
  Examples include: Bar Graph, Pie Chart, X & Y axis Graph, Histogram, etc. Groups will decide how to best display their data.

Materials: Future Farm materials/seeds/water/sunlight

Procedure: Each day, after set up, we will document, both with words, and visually, what we observe in our Future Farms.

Results: Group _____ showed the most growth within the Future Farm lab.

Conclusion: The students will discuss and analyze results based on numeric data each group collected.

Application: How can hydroponic growth be a catalyst in solving world hunger issues? Students will research and discuss the benefits of hydroponic growth (problem/solution).

Resources: One of the most important things for a student to do is recognize the people and resources used in developing and conducting the project. Name the people who offered knowledge or helped, and list the web sites, retail stores, magazines, books, computer programs, etc. that were used as sources of information or supplies. Future Farm, hydroponic growth websites, etc.