HOW TO DEVELOP A SCIENCE FAIR: HELPING YOUR STUDENTS

• SELECTING PROJECTS
  o Identify that students are unique individuals with different aptitudes.
  o Try to identify what is interesting to the student.
  o Prompt the student, once an interest is found, with a question like, “What is a societal issue in this area?”
  o Encourage the student to develop an independent inquiry of something pertaining to the societal issue.
    ▪ IT DOES NOT HAVE TO SOLVE THE PROBLEM, NOR SHOULD IT BE EXPECTED TO, BUT IT SHOULD ADDRESS ONE.
  o Insure that the project is doable. Many times unsuccessful inquiries are simply topics that are not easily testable or extremely expensive to test.
  o Encourage students to notice what is of interest currently. (i.e. biofuels, alternative energy, global climate change, etc.)
  o Is the project idea unique?
    ▪ Construction of a hovercraft has been done many, many times.
    ▪ Baking soda and vinegar volcanoes are not unique.
    ▪ Rate of bread molding is not a pressing current topic of interest to most.
  o Select a project that will allow for a number of replications for statistical validity.
    ▪ One replicate does not give enough information to draw a conclusion upon.
    ▪ Three replicates is minimal number for statistical validity.
    ▪ Five, or more, replicates are better.
  o Select a project that is not too expensive to conduct.
    ▪ Nice work can be completed with low cost if the student is wise in the topic selected.
  o Select a project that is age appropriate.