

GIFTED CHEMISTRY STUDENT SUMMER WORK

Next year will be your last required science fair experiment at Sandy Creek High School. As such, we expect a high quality project that represents what you have learned about research and the experimental process. Fall semester is very hectic with football and other fall sports, band and chorus. Please keep this in mind when planning for your science fair experiment and research.

By the first Wednesday of school for 2021, you will need to complete the Topic Proposal (see details below).

You will need to select your topic, come up with a problem to solve and a basic idea for how you will conduct your experiment. You may **begin your research during the summer break, but keep track of all research in a bound composition notebook- skip the first 5 pages before recording research found and all sources!!** Please remember that Wikipedia is not considered a valid source and you will need magazines, books, newspapers/journals as well as internet sources. Record all information for particular sources in your logbook along with all brainstorming or ideas (record dates for every entry and where you did research). You cannot use information if you do not know its source. You may cite your sources using MLA format/APA format (search online to see this format if you are unsure). Please see the details below as to what your topic proposal should contain. If it does not address everything, then you will be asked to correct it before receiving approval. **COMPLETE A PROPOSAL This will be your first homework grade for Gifted Chemistry.** If you want to do a continuation or extension of this past year's project, then you need to contact Mrs. Bryant for permission prior to the topic proposal being due and must have all original paperwork back from your teacher and your logbook(s) to do a continuation. You are encouraged to work with a partner, so choose wisely and remember each must complete 5 separate research sources.

Details for TYPED Topic Proposal:

LINK TO RESEARCH PLAN <http://bit.ly/FCBOEScienceFair>

- I. **Problem being solved** (should be in form of question)
- II. **Purpose** (explain your reason for selecting this topic and why it is important to society).
- III. **Hypothesis** based on what research seems to indicate might happen- must have an EDUCATED reason for your hypothesis. (Write in an "if . . . then . . ." format)
- IV. **Independent (manipulated) & dependent (responding) variables.** Make sure you are only changing one variable in your experimentation!!
 - a. list/explain your **controlled variables** (constants).
 - b. Include a brief explanation of your **experimental design** (how you will set up the experiment, such as . . . number of plants, where it will be done, number of samples and trials). You must have a minimum of 10 trials per experimental group (you need to have at least three experimental groups and a control) . *This means 40 plants, 40 pieces of paper tested, etc . . . for most projects and 100 human subjects for these type of experiments.* Include how you will analyze your data.
- V. Need to include **five sources** where you have gathered general information cited in MLA format (NO Wikipedia!). If you have any questions please email Mrs. Bryant before July 1st who will get back to you as soon as I am able. **EMAIL TO:** bryant.christina@mail.fcboe.org