

## **CHOOSING A RESEARCH QUESTION CHECKLIST/QUESTIONNAIRE**

**Directions: During this summer you will use the time to choose/finalize your IA research topic and start formulating a question. Use this guideline to create your IA topic/question. You must be able to answer all the questions with your IA topic/question. It seems like a lot, but this will help you formulate a concise and robust IA.**

- What unit does it relate to?
- Does it involve a simple method/equipment but sophisticated concept?
- Does it have an Independent Variable (IV), a dependent variable (DV), and control variables (CV) (not mandatory, but recommended)?
- Can you explain how it is personally interesting to you?
- Can you personally design the question or change the method/materials/something so the process is personalized?
- Does it have a known expected result you can put in your hypothesis? (while this is not mandatory it can be a good talking point for if your results are different than known results)
- It is a normal lab with an added touch of bling?
- Can you research the safety and environmental issues of handling and disposing of your chemicals (MSDS)?
- Can you think about any related ethical issues?
- Can you collect a wide range of IV data and can you justify how it's the widest possible range?
- Can collect a lot of data by doing many trials? (not relevant for all)
- Can you TAKE PHOTOS?
- Can you record QUALITATIVE OBSERVATIONS?
- Can you actually CONTROL the control variables?
  - This is for the later end, but thinking ahead, do you have at least 5 peer-reviewed published paper on your topic?