Title: SCIENCE SUGGESTIONS.
Bloom's taxonomy
Bloom's taxonomy (below) is the hierarchy of types of knowing. The most basic type of knowing is
Remembering, while the highest level is creating new work. Accomplishing higher levels require the
Lower levels - it is easier to apply knowledge if you can remember a fact.
There is an image of a pyramid, from Vanderbilt University Center for teaching. This pyramid is separated out into six sections that stack on eachother.
The bottom (first) level is called “remember” and questions related to this level should assess recall of facts and basic concepts. Associated Bloom’s taxonomy verbs are define, duplicate, list, memorize, repeat, and state.
The second level is “understand” and questions related to this level should assess explaining ideas or concepts. Associated Bloom’s taxonomy verbs include classify, describe, discuss, explain, identify, locate, recognize, report, select, and translate.
The third level is “apply” and questions related to this level should assess use of information in new situations. Associate Bloom’s taxonomy verbs include execute, implement, solve, use, demonstrate, interpret, operate, schedule, and sketch.
The fourth level is “analyze” and questions related to this level should assess drawing connections among ideas. Associated Bloom’s taxonomy verbs include differentiate, organize, relate, compare, contrast, distinguish, examine, experiment, question, and test.
The fifth level is “evaluate” and questions related to this level should assess justifying a stand or decision. Associated Bloom’s taxonomy verbs include appraise, argue, defend, judge, select, support, value, critique, and weigh.
The sixth and highest level is “create” and questions related to this level should assess production of new or original work. Associated Bloom’s taxonomy verbs include design, assemble, construct, conjecture, formulate, author, and investigate.

All levels of this hierarchy are important.
Research is the creation of new knowledge.

How do I do good science?

- Ask questions.
- Use Google Scholar.
- Cite your evidence.
- Write it down.
- Follow the data.

Guide to receiving feedback

- Define the type of feedback you want.
- Focus on the science, not you.
- Consider if it is useful.
- Imagine it comes from a good place.
- Discuss feedback with others whose
- Perspective you value.

Guide to Giving feedback

- Ask what type of feedback they want.
- Focus on the science, not them.
- Consider if it is useful.
- Deliver it from a good place.
- Offer support, too.

Science is hard
When experiments fail:

- Take a break.
- Take a nap.
- Vent to someone.
- Regroup & make a plan.
- Ask for help.
- Try again.

Guide to asking for help
Identify what you are asking for. (Advice? A listening ear? A protocol?)
Identify what information is required. (Data? Protocol? Paper?)
Present information & ask for what you need. (Here's the experiment goal. Here's my gel image. Here's what each lane contains. Can you give me advice?)

It is common to struggle with feedback & asking for help.
All questions are good questions!
If you can't write, draw, or explain it, you don't know it yet.