



Tool Kit – Labs

- Identify the purpose(s) of each laboratory session (data analysis, equipment usage, writing reports, etc.), communicate the purpose(s) to students, and align assessments with purpose(s) (<https://doi.org/10.1021/ed4000102>)
- Identify skills that can be accessed remotely, possibly with the use of at-home laboratory kits or experiments using household materials (see literature on digital badging <https://doi.org/10.1021/acs.jchemed.6b00234>)
- Consider the use of student-generated video as a way for students to synthesize their understanding of key topics (<https://doi.org/10.1039/C9RP00182D>)
- Use pre-recorded videos or student-created videos as an opportunity to have students analyze and critique poor lab technique and how it may impact experiment outcomes (<https://iopscience.iop.org/article/10.1088/0031-9120/41/6/007/pdf>, <https://www.lifescied.org/doi/pdf/10.1187/cbe.17-07-0133>)
- Utilize peer assessment to allow for a higher volume of student assessment artifacts than may otherwise be feasible given limitation of student/instructor ratio, this can also be used to simulate aspects of the scientific article publication process (<https://journals.aps.org/prper/pdf/10.1103/PhysRevPhysEducRes.13.020126>, <https://doi.org/10.1021/ed8000107>).