

Tools for Primary Literature in the Undergraduate Classroom

Provided by [BREWMOR](#)

1. Science in the Classroom-provides annotated papers published in Science to help facilitate student comprehension
<https://www.scienceintheclassroom.org/>
2. iBiology-talks by prominent biologists in their field, often going in depth on a paper they published
<https://www.ibiology.org/>
3. Science Education Resource Center (SERC) at Carleton College-numerous resources on teaching the process of science
https://serc.carleton.edu/sp/process_of_science/index.html
4. Perusall - tool for crowd-sourced annotation of primary literature (it is free!)
<https://www.perusall.com/>
5. Hypothes.is - an open-source social annotation tool (similar to Perusall)
<https://web.hypothes.is/> (how-to: <https://journals.asm.org/doi/10.1128/jmbe.v22i1.2135>)
6. The CREATE Method - approach to help guide faculty in teaching primary literature to undergraduates
<https://teachcreate.org/> as well as <https://uclalibrary.github.io/creates/>
7. The TRIM Method - Teaching Real Data Interpretation with Models (similar to the CREATE method)
<https://www.lifescied.org/doi/10.1187/cbe.15-11-0239>
8. GENETICS Primer section
https://academic.oup.com/genetics/search-results?f_TocHeadingTitle=Primer
9. Case It!-Molecular Biology experiment simulation tool
<https://www.caseitproject.org/>
10. Podcasts paper: <https://pubmed.ncbi.nlm.nih.gov/33884056/>
11. YouTube Playlist for TWiM:
<https://www.youtube.com/playlist?list=PLGhmZX2NKiNk7qgVfW8I1sWPq3eL22OpW>
12. TWiM Paper: [\(PDF\) Teaching in the Time of COVID-19: Creation of a Digital Internship to Develop Scientific Thinking Skills and Create Science Literacy Exercises for Use in Remote Classrooms](#)

13. Project-based learning unit: [Cancer and the Cell Cycle Research Paper](#)
14. The 5CCs matrix from Qubest:
<https://qubeshub.org/community/groups/coursesource/publications?id=2712&v=1>
15. The Introduction, Methods, Results, and Discussion (IMRAD) approach
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC442179/> -
16. Graphical Abstracts:
<https://www.elsevier.com/authors/tools-and-resources/graphical-abstract>
17. Ten Simple Rules for Reading a Scientific Paper
<https://journals.plos.org/ploscompbiol/article?id=10.1371/journal.pcbi.1008032>

Primary Lit Papers that Work well with Undergraduates:

1. Jinek et al. Science, 2012.
2. <https://elifesciences.org/articles/64250> for cell biology
3. Hou *et al.* "Genome Analyses of Single Human Oocytes" (2013) *Cell*,
<http://dx.doi.org/10.1016/j.cell.2013.11.040>, especially Figure 6A: useful for teaching about DNA content during meiosis (for more info: Joe Ross: jross@csufresno.edu)
4. <https://pubmed.ncbi.nlm.nih.gov/12481136/>: Zebrafish heart regeneration