

**Assignment Title:** Integrating Time Mechanics in Biology PSETs

**Type of Course:** Undergraduate Stem Cell Biology

**Mechanic(s):** Time

**Draft of Prompt:**

Take a class on stem cell biology where there are problem-set, presentation, and research proposal type essays. Students have conventional set deadlines: one week for all PSETS with two weeks for presentations and research proposals. Everything is laid out in the syllabus and all of the material is written. For the student experience, this gives very little flexibility around other commitments or leniency during stressful crunch zones in the semester and doesn't let them focus or delve deeply into the content that interests them most. Here, time moves could change the dynamics

1. Timers: putting the PSETs on canvas and giving students 2 hours to complete them would ensure students put only their best shot into a small time-window. Beyond being self-scheduled, it also gives students a chance to complete their PSET and then leave it behind and focus on something else.
2. Turns: imagining an essay with three parts to the question (what, why, and how), collaborating students could take turns completing each part to encourage adaptability and teamwork. One student answers the what before another, in their turn, answers the why, and another answers the how. Collectively answering three topics, each gets a turn to respond to the others and interact with all three concepts in different ways
3. Race: Allowing flexibility for students schedules, their due-date could be flexible but point-specific. With a 5-point a day grade change, a PSET set Monday may be due the following Monday for 100 points, but a PSET turned in on Sunday would give 105 points, a PSET submitted Wednesday receives a maximum of 90 points. In this way, it is a race for students to get their PSET in as soon as possible, but taking an extra day will not likely hurt their grades. Across multiple PSETs, this also gives students a chance to recoup lost points with later PSETs.
4. Rewind / Pause / Fast-Forward: To give students some flexibility during stressful periods, allowing students to pause, rewind, or fast-forward once or twice during the semester could alleviate assignment stress. Students may rewind and redo an assignment they got a bad grade on, fast-forward and complete a future assignment early for extra points or fast-forward past that assignment to drop it, or students may pause the assignment for a few more days to think about an answer.
5. Calendars: removing the element of set deadlines and instead allowing students to adapt their assignments to their schedules would help students manage busy periods. Perhaps, given a list of all assignments, students pick which Mondays they want to turn in which assignments based on their schedules. Perhaps, students may have 100 total days to commit to assignments and 'spend' their assignment days over the course of the

semester: after finalising their schedule, they could allot 30 days to their final project and distribute the remaining 70 days to one week for each of 10 assignments - alternatively, they could allocate 14 days to an assignment during busy periods and have just 15 days for their final project.

6. Removal: the most drastic to the course design is removing time altogether. Students are told they need to gain 100 points over the course of the semester however they wish. There are 20 assignments to choose from across the topics, some worth more than others and more difficult than others; students may then do three large 33-point projects in three topics or ten smaller 10-point PSETs across all topics, or some mix between these. Students can turn work in as they wish, and will choose how they think they'll interact best with the materials to get the most out of the course.