

Updated Gene Regulation Explored Tutorial Lab (11/2022)

We modified the tutorial based on extensive beta feedback from students and professors.

TO IMPROVE GENE REGULATION EXPLORED, WE:

- Included a few additional higher-order and practice formative assessments, to help students practice difficult terminology, concepts, and logic.
- Increased use of icons and helper text to improve the usability of interactive exercises.
- Improved some passages that explain the logic of gene regulation by removing confusing questions and making the passages tighter and clearer.
- Fixed a few bugs and improved feedback in the interactive simulations.
- Increased student access to help and hints in Section 4, which consists primarily of open-ended challenges.
- Revised graded questions based on student performance during the beta period.
- Added different versions of some graded questions, for cheating deterrence.
- Are creating Poll-and-Discuss slide stack and a guide to using the lab as supplemental materials for instructors and TAs, both of which will be available through the SimUText System's Instructor Portal starting January 2023.

WHAT WE DID NOT CHANGE:

- The majority of beta instructors across introductory and upper-level majors courses reported that the module's structure and level of difficulty was appropriate for their classes; therefore, we made no major changes in these areas.
- Overwhelmingly, both instructors and students reported that the module's interactive simulations, dynamic exercises, and questions with feedback enable students to develop a deep understanding of the material. Therefore, we retained these successful task sequences and instructional tools in the final version of the tutorial.