Unzipping Your Genes: A Fashionable Tutorial in Gene Expression

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Transcription is a very detailed process that is essential for understanding the basis of gene expression. However, undergraduate students are taught this concept during introductory biology courses and are rarely given the opportunity or time to diagram this process in a step-by-step manner. Students reconstructed the initiation, elongation, and termination steps of eukaryotic transcription, using a physical model. Briefly, students determined the stages of transcription with jean material and cloth pieces that symbolize important components of the transcription machinery. In this workshop, participants worked together to outline the process of transcription in small groups and presented their model to others. This module can be used to compare eukaryotic and prokaryotic transcription. Furthermore, this versatile activity be used to simulate errors in transcription that result in disease and elucidate the mechanisms of genetic engineering technologies.

Keywords: Transcription modeling

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