

Goal: Information Flow

Objective: Explain the importance of DNA, RNA, and protein in the flow of genetic information.

Outcome 2:  
SWBAT describe the general structure of DNA, RNA, and proteins and how it relates to their roles in replication, transcription and translation

Outcome 1:  
SWBAT list and describe the effects of regulation at various stages throughout the information flow

Outcome 3:  
SWBAT distinguish between the effects of errors in replication, transcription, and translation.

Outcome 4:  
SWBAT design an experiment that assess the integrity of the flow of genetic information

Outcome 5:  
SWBAT explain how certain gene organization (operons, regulons, regulatory regions) relate to transcription and translation

Remember  
Understand

Remember

Apply  
Analyze

Create  
Evaluate

Understand

Virtual Tour: DNA, RNA and proteins. Students work individually out of class to explain how the structural features of their molecule/protein help it perform it's functions in replication, transcription, and/or translation. In class, work in groups to present a group tour of your molecule.

Regulator Relay: Using various effector molecules provided in class, demonstrate the various modes of regulation in response to environmental cues.

Literature review: We will work through figures from primary literature that provide the evidence of proteins functions in the flow of genetic information. After initial demonstration, students will break into groups to design their own experiment.