Targeted Readings: Evolution: 4 Mechanisms of Evolution (Part I)

3rd Canadian ed. - Whiskey jack on cover Hard copy	**2019 UBC custom ed. – Frog on cover**	2014-2018 UBC custom ed. – Steller's Jay on cover
Chapter 22: Evolution by Natural Selection 22.3 The Process of Evolution: How Does Natural Selection Work? 22.4 Evolution in Action. 22.5 Common Misconceptions about Natural Selection and Adaptation.	**Evolution by Natural Selection (pp 254-264)** 3. The Process of Evolution: How Does Natural Selection Work? 4. Evolution in Action 5. Common Misconceptions about Natural Selection and Adaptation.	**Chapter 24: Evolution by Natural Selection** 24.3 The Process of Evolution: How Does Natural Selection Work? 24.4 Evolution in Action. 24.5 Common Misconceptions about Natural Selection and Adaptation.
Chapter 23: Evolutionary Processes 23.2 Natural Selection 23.3 Genetic Drift 23.4 Gene Flow 23.5 Mutation 23.6 Nonrandom Mating - Assortative Mating - Sexual Selection	**Evolutionary Processes (pp 274-294)** 2. Natural Selection 3. Genetic Drift 4. Gene Flow 5. Mutation 6. Nonrandom Mating - Assortative Mating - Sexual Selection	**Chapter 25: Evolutionary Processes** 25.2 Types of Natural Selection 25.3 Genetic Drift 25.4 Gene Flow 25.5 Mutation 25.6 Nonrandom Mating - Assortative Mating - Sexual Selection

- Broad Learning Goals
  - Describe the four processes (mechanisms) that result in changes in allele frequencies in a population over time (i.e. result in evolution).
  - Predict and explain how the main mechanisms of evolution may affect populations in terms of their allele, genotype and phenotype frequencies through time.
- Specific Learning Goals
  - Describe how selection, drift, mutation and gene flow can affect allele and genotype frequencies in a population
  - Describe how non-randoming mating can alter genotypic and phenotypic frequencies in a population
  - Explain how genetic drift can be responsible for changes in allele frequencies in populations that have changed in size and in populations that have not changed in size
  - Contrast with other mechanisms the impact of mutation on changing allele frequencies through time.
  - Given a scenario, explain how each major evolutionary mechanism could affect allele or phenotype frequencies and justify your explanation with specific evidence.
  - Given a scenario, generate or evaluate hypotheses for the possible evolutionary mechanisms responsible for observed changed in genotype or phenotype frequencies within a population