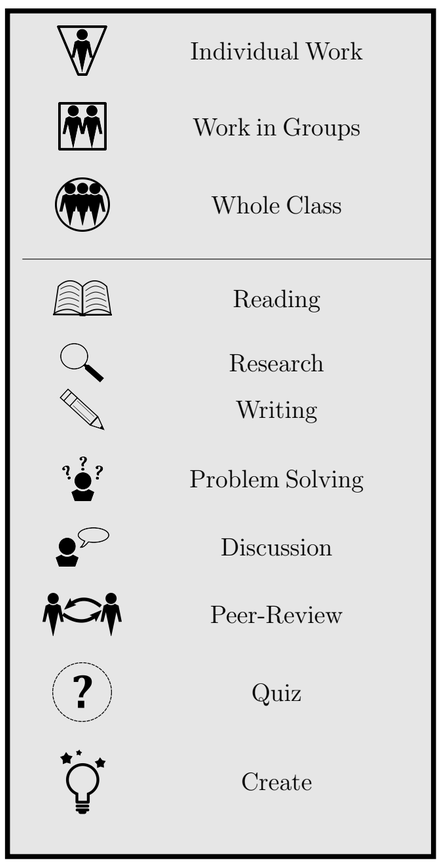
The sailing iguanas: a mini case in speciation

By Edward Awad



Out of Class

In Class (Instructor)

In Class (Students)

Begin Here.

Students are given a document with key concepts and learning objectives. They are also assigned readings from the textbook.

Students watch videos about the concepts of species and speciation.

Students complete a quiz through Moodle to test their knowledge after having watched the videos and completed their assigned readings

Instructor: Answers any questions students might have from the pre-assigned videos, quiz and document.

Instructor splits the students into groups of 3-4, then introduces the activity by explaining the objective

In their groups: Students are tasked to predict the evolutionary forces that will act on a group of iguanas that drifted from Guadalupe island to Anguilla island.

In their groups: Students are tasked to design a study to test their predictions that the evolutionary agent(s) they identified in the previous question produced allele frequency differences in the 2 populations of iguanas

In their groups: Students are tasked to design an experiment that would test whether the 2 populations of iguanas in the year 2050 have diverged into 2 separate species. The experiment should identify the species definition(s) used and should include all components of good scientific inquiry (hypothesis, prediction, controls, replication, variables, etc.).

In their groups: Students can also check each other's answers and help each other

Instructor goes through seven clicker type questions.

Optional: If less than 70% of the students answer the clicker questions correctly they can discuss and re-answer them as a group

Students submit their answers which should include the predictions, study to test allele frequency changes and experiment to test iguanas speciation. Then, the teacher reviews the answers with the class.