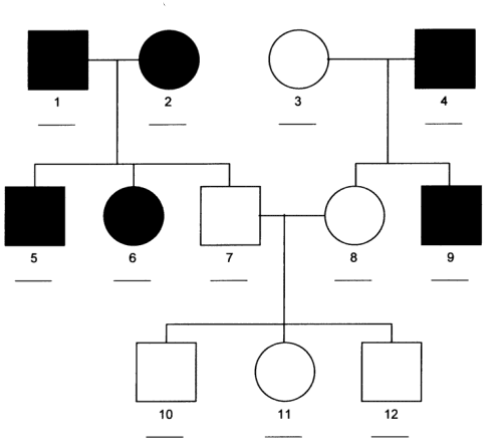
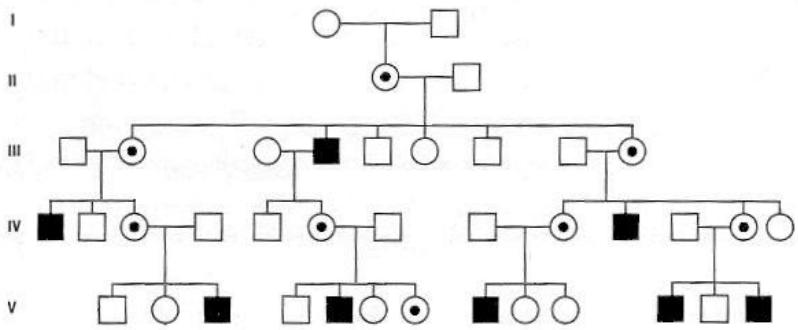
SI #14 LIFE 1010-01

1) Discuss with your group the difference between epistasis and polygenic inheritance.

2) Observe the following pedigrees and determine the pattern of inheritance.



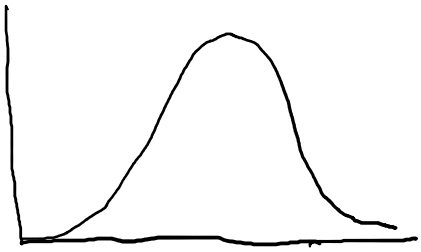


3) Discuss with your group the difference between natural selection and evolution.

4) What are some processes that contribute to genetic variation?

5) List 3 pieces of evidence that support the theory of evolution.

6) Use the template below to draw a graph of each mode of natural selection.



7) Discuss the differences between genetic drift and gene flow.

8) In your own words, describe the Hardy-Weinberg equilibrium.

9) Draw the chemical reactions of photosynthesis and cellular respiration.

10) Draw a water molecule and show the polarity.

Medical Matters

A pregnant couple come into your clinic to get blood tests in hopes of determining the blood type of their child on the way. The mothers blood type is determined to be I^AI^A while the father's blood type is I^AI^B Use a punnett square to determine the probability of the child's blood type. Say the mother has a negative RH factor and the child has a positive RH factor, what is the problem with this scenario?

The appendix is an organ that many people have removed due to appendicitis. Many argue that the appendix is a remnant from our more herbivorous ancestors and is now useless. Others argue that the appendix is a reservoir for "good" bacteria that helps restart your gut biome in case of any imbalance. If we follow the school of thought that the appendix is now useless, what do we classify this organ as?