

Review guide: Biology Unit II test.

Test date: Thursday, April 16.

Note: The student may prepare a set of handwritten notes to submit to Clark BEFORE the test starts for extra credit points counted towards the test itself.

The stages of Meiosis: How does the cell transform for each step? What is the final product of Meiosis? How do these cells differ in structure and function from other types of cells? What happens in each of the four steps? (Prophase, metaphase, Anaphase and Telophase) In which phase do we start to see DNA in the form of Chromosomes? What are 'homologous chromosomes'? What process guarantees that every egg and sperm are unique in their genetic combinations? What do the Centrioles do? What happens in Telophase? What is the outcome of Meiosis II?

From the Lactase pedigree discussion and activity: Be able to describe how Lactase persistence may have evolved. Given a family tree showing several generations, determine whether a trait is dominant or recessive.

Given the genotypes of two parents, be able to construct a Punnett square to determine the probability of offspring carrying or expressing a particular trait.

PTC testing activity. What 'taste' may or may not be sensed by this compound? What common food items contain it? What are papillae? Where are the bitter taste receptors located? What was the evolutionary 'trigger' that led to the appearance of 'bitter taste receptors'? What do these tastes indicate about the plant? Which species has 'more sensitive taste receptors; people or deer? Why?

From the article: You are contaminated. What is the concept of the 'exosome'? What is meant by the statement: Humans are permeable creatures? How have the presence of plastics affected fish and plants? How does plastic enter a new-born baby? How well does the human body filter out plastics? How much plastic could be in your brain?

From the populations simulation and activity: Be able to describe likely outcomes given different initial conditions. Why do the population sizes oscillate up and down? Is this natural or due to human interference?

Gregor Mendel: Who was he, what did he study, what is he known for? Why wasn't he famous in his day? What are his 'rules for inheritance'?

From the video: Fantastic Fungi: How do fungi interact with other plants and trees? What evidence do we have to show that the plants/trees actually 'nurture' the fungi? How does the presence of fungi help the plants and trees?

From the article: Oldest Human Genomes Reveal.. Where did the LGR people live? How long ago were they there? What was their likely 'skin tone'? What kinds of clothes did they wear? How long have modern humans lived in China? Australia? What did their genetic similarities suggest about the likely population size? How long ago did Neanderthals inhabit Europe?