

2019 Academic Super Bowl

Senior Science

Final Study Guide

Fertile Crescent



KING TUTANKHAMUN

- I. Physics and Astronomy - 33%
 - A. Babylonian Astronomy (33% of the overall 33%)
 - 1. Eclipses and the Saros Cycle
 - <https://eclipse.gsfc.nasa.gov/SEsaros/SEsaros.html>
 - <https://www.space.com/37818-saros-series-of-eclipses.html>
 - 2. Calendar <http://www.livius.org/articles/concept/calendar-babylonian/>
 - 3. Jupiter's Motion <http://science.sciencemag.org/content/351/6272/482>
 - B. Simple Machines (66% of the overall 33%)
 - 1. Inclined Plane
 - a. Wedge
 - b. Screw
 - 2. Lever
 - a. Wheel and Axle
 - b. Pulley
- II. Biology, Earth and Environmental Sciences - - 33%
 - A. *Biology*: Birth and Development of Agriculture (50% of the overall 33%)
 - 1. Development of agricultural crop plants
 - a. Grains
 - b. Pulses/Legumes
 - c. Other
 - B. Domestication of Animals
 - 1. Ruminant Ungulates
 - 2. Other
 - C. Genetics
 - 1. Chromosomal inheritance
 - 2. Ploidy
 - 3. Basics (essentials of agriculture plant breeding)
 - D. *Earth and Environmental Sciences*: Rivers of the Fertile Crescent (50% of the overall 33%)
 - 1. Structure & Physical Characteristics
 - 2. Environment and Ecology
 - 3. The Seas around the Fertile Crescent - Mediterranean and Persian Gulf
- III. Chemistry - 33% (see additional document for more specific information)
 - A. Periodic Table
 - B. Periodicity
 - C. Types of Chemical Reactions

AP Chemistry text books; some regular high school level texts may have some of the initial periodic table information.

There are many examples of tests and practice sheets on the internet that can be used. Many don't give background information about the topics, but can provide examples of the types of things which may be asked. There are too many to list as references. Khan Academy website may provide information for teachers/coaches who are unfamiliar with the topics being studied.

Sources: Internet sites, science textbooks

2019 Outlines were developed by coaches who chose to share ideas at the 2017 Academic Coaches Conference and through email, and further developed by question writers.