

BIOLOGY KEYSTONE EXAM

The Keystone Exams are end-of-course assessments designed to evaluate proficiency in academic content. Beginning in 2012-2013 the Algebra I, Literature, and Biology Keystone Exams will replace the 11th grade Pennsylvania System of School Assessment (PSSA) tests in mathematics, reading, and science for purposes of satisfying No Child Left Behind (NCLB)/Adequate Yearly Progress (AYP) requirements. Therefore, all students in grade 11 must participate in the Algebra I, Literature, and Biology Keystone Exams. Additionally, students in any grade who are enrolled in a Keystone related course will participate.

Pennsylvania adopted the Common Core Standards, standards aligned with expectations for success in college and the workplace. The keystones are designed to measure these standards. The Biology Keystone Exam will include multiple-choice questions and open-ended questions.

For a student to perform at an advanced level they must be able to do the following:

Basic Biological Principles (*From Biology*)

- Evaluate the application of scientific reasoning, inventions, tools, and new technologies in the study of biology.
- Apply the scientific concepts of hypothesis, inference, law, theory, principle, fact, and observation.
- Analyze structural and functional similarities and differences between prokaryotes and eukaryotes.
- Evaluate relationships between structures and functions at various levels of biological organization.
- Analyze the unique properties of water and explains how they support life on Earth.

Chemical Basis for Life (*From Biology*)

- Evaluate relationships between structure and function at various levels of biochemical organization.
- Analyze and predict how enzymes can regulate biochemical reactions within a cell.

Bioenergetics (*From Biology*)

- Analyze cell structures and processes that transform energy in living systems.

Homeostasis and Transport (*From Biology*)

- Analyze and predict how cell structures transport material into, out of, and within a cell.
- Analyze how organisms use feedback and response mechanisms to maintain homeostasis.

Cell Growth and Reproduction (*From Biology*)

- Compare and analyze the three stages and the outcomes of the cell cycle.

Genetics (*From Biology*)

- Analyze and predict how genetic information is inherited, altered, and expressed.
- Analyze the processes associated with protein synthesis.
- Predict the impacts of genetic engineering on medicine, forensics, and agriculture.

Theory of Evolution (*From 9th Grade Science*)

- Evaluate the mechanisms and sources of evidence related to the theory of evolution.

Ecology (*From 9th Grade Science*)

- Compare ecological levels of organization in the biosphere.
- Analyze interactions and relationships in an ecosystem as they relate to energy flow, biotic components, biogeochemical cycles, and limiting factors.
- Predict changes in an ecosystem in response to natural and human disturbances.

GENERAL KEYSTONE INFORMATION:

Keystone Exam Resources on the PA Department of Education Standards Aligned System portal

- <http://www.pdesas.org/module/assessment/Keystone.aspx>

Information for Parents & Guardians from PA Department of Education

- http://static.pdesas.org/Content/Documents/Information_for_Parents_or_Guardians_PA_Keystone_Exams_Aug_2012_final.pdf

BIOLOGY KEYSTONE REVIEW RESOURCES:

Keystone Biology Sample Questions

- <http://tesd.net/cms/lib/PA01001259/Centricity/Domain/98/Keystone%20Bio%20Sample%20Questions.pdf>

Crash Course – Biology (40 short videos by topic)

- <http://www.youtube.com/course?list=EC3EED4C1D684D3ADF&feature=plcp>

Keystone Biology Flashcards (Conestoga HS – with a printable version available)

- <http://tesd.net/Page/8862>

Keystone Biology Review Guides by topic – (Hempfield HS)

- <http://www.hasdpa.net/21512042794638620/blank/browse.asp?A=383&BMDRN=2000&BCOB=0&C=64856>

Keystone Biology Resources by Module (Resources for each module compiled by Council Rock HS)

- <http://www.crsd.org/Page/31715>

SparkNotes Review of Biology

- <http://www.sparknotes.com/biology/>

Biology Review from Khan Academy (Podcasts for review of Biology topics)

- <http://www.khanacademy.org/science/biology>

Review of a Year of Biology in 12 pages

- This is titled as a review for the New York Regents Exam, but covers all essential terms for Biology in an organized fashion.
- http://newyorkscienceteacher.com/sci/files/user-submitted/LE_Must_Know_Facts.pdf

CK-12 Biology E-book

- Biology Textbook from CK-12 Foundation available free to access or download.
 - <http://www.ck12.org/book/Biology/>
- Biology Textbook from CK-12 Foundation available free to download on Amazon for Kindle.
 - http://www.amazon.com/CK-12-Biology-ebook/dp/B006VYHU84/ref=sr_1_1?s=digital-text&ie=UTF8&qid=1350411041&sr=1-1&keywords=ck-12+biology