STEM (Science, Technology, Engineering, and Mathematics)
High School Content Modules

Developed by the West Tennessee STEM hub and a team of West Tennessee high school teachers with deep content expertise, the online modules incorporate interdisciplinary connections, STEM content, and Common Core State Standards (CCSS) across the curriculum. Each module can be used:

- **As a unit of study for each grade level during an academic year**
- **As a supplement to teachers' lesson plans**
- **To introduce new areas of content knowledge and support improved classroom instruction**
- **To explore STEM curriculum as part of traditionally non-STEM classes**

Log In and Enroll

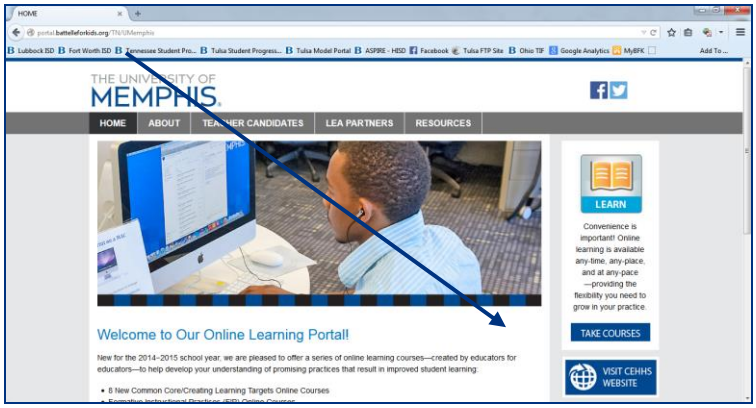
1. Visit portal.BattelleforKids.org/TN/UMemphis to access CEHHS' online learning portal.

2. On the portal home page, click the "Take Courses" button.

3. *If this is your first time logging in*: Click on "create a new account" and enter your respective school e-mail address and access code.

   Returning users: Enter your respective school e-mail address and password on the "Login" page.

4. Once logged in, in the BFK•Learn® section, click on "My Learning."



5. In the "Quick Links" section on the right side of the page, click on "Enroll in Learning."

6. Click the "Courses" tab. Then, type "TNSTEM" in the "Code" box and press "Enroll."

7. Check the box by each module you want to enroll in, and click "Enroll."

8. Confirm your selection by clicking "Enroll."

9. Launch the module by clicking "Begin." *If you are enrolled in other courses already, these courses will show up at the bottom of your list.*

- Once you have completed a module, it will disappear from your "Active Learning" list. You can continue to review the module by clicking "View Completed Learning" in the "Quick Links" section.

STEM High School Content Module Descriptions

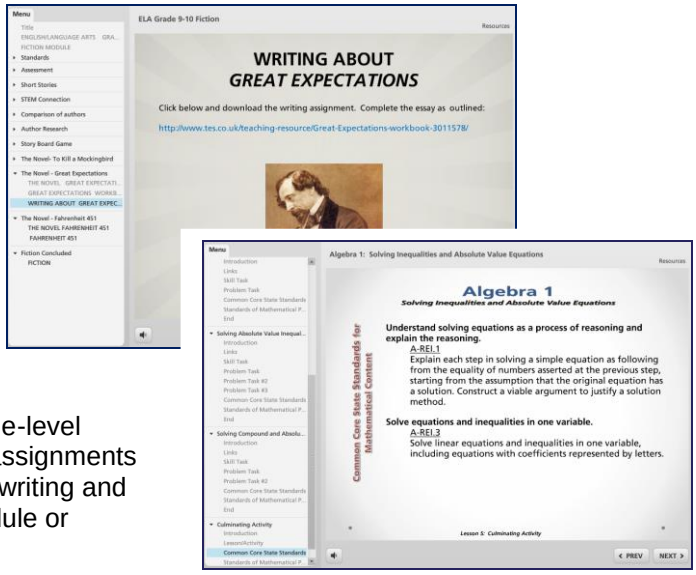
Algebra 1: Solving Equations
Contains interactive lessons on solving linear equations, Incorporates project-based learning activities, lesson plans, videos, worksheets, games and Web explorations developed to enrich student understanding of math, math history and the integration of math across the curriculum.

Algebra 1: Solving Equations and Inequalities
Contains interactive lessons on solving multi-step equations and numeric inequalities. Incorporates project-based learning activities, lesson plans, videos, worksheets, games and Web explorations developed to enrich student understanding of mathematics, mathematics history and the integration of math across the curriculum.

Algebra 1: Solving Inequalities and Absolute Value Equations
Contains interactive lessons on solving single and multi-step equations. Incorporates project-based learning activities, lesson plans, videos, worksheets, games and Web explorations developed to enrich student understanding of math, math history and the integration of math across the curriculum.

English/Language Arts: Grade 9−10 Drama
Collection of resources and activities to be used as part of an English course for grades 9 or 10, with literary/ drama selections recommended for each grade level. Incorporates interdisciplinary assignments and is aligned to CCSS for literature and informational texts, writing and speaking and listening. Teacher may use the entire module or portions of it.

English/Language Arts: Grade 9−10 Fiction
Includes resources and activities to be used as part of an English course for grades 9 or 10, with some literary selections recommended for each grade level. Incorporates interdisciplinary assignments and is aligned to CCSS for literature, informational texts, writing and speaking and listening. Teachers may use the entire module or portions of it.



English/Language Arts: Grade 9−10 Poetry
Includes resources and activities to be used as part of an English course for grades 9 and 10, with some grade-level literary recommendations. Incorporates interdisciplinary assignments and is aligned to CCSS for literature, informational texts, writing and speaking and listening. Teachers may use the entire module or portions of it.

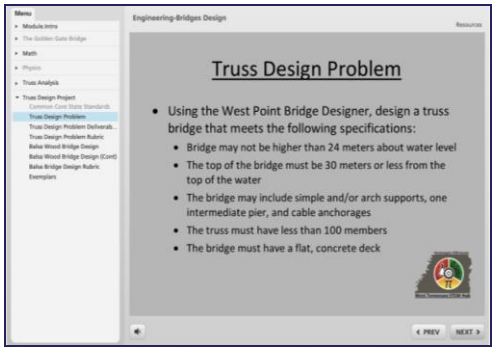
Engineering: Bridge Design
Supports the following student learning objectives: to evaluate the history, economics, mathematics and science behind the design and construction of the Golden Gate Bridge; to apply trigonometric ratios and vector, force and movement analysis to design and construct a bridge; and to write a technical report incorporating cost-analysis and design justifications.

Science 9−10: Heredity
Consists of four components (to be used by teachers in any order): meiosis, DNA, Mendelian genetics and other forms of heredity and human genetics. Examines the big idea of inheritance and variation of traits, and provides students with specific information about how heredity affects their lives today and in the future. Each component contains links to sample projects, notes, presentations and assignments with rubrics.

Science 9−10: The Nature of Science
Takes a project-based approach to lessons and activities that can be utilized in nearly any high school science class. Topics explored include: history of science, experimentation, defending conclusions and analyzing data. Contains links to sample projects, notes, presentations and assignments with rubrics.

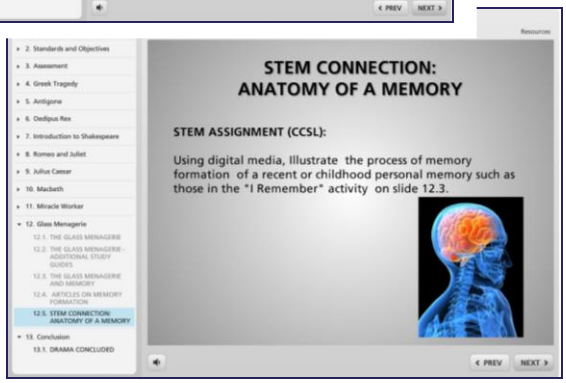
Science: Biology-Ecology
Takes a project-based approach to lessons and activities that can be utilized in most any type of high school science class. Links to sample projects, notes, slide-show presentations, animations and assignments with rubrics.

Units incorporated are: Interdependent Relationships and Ecosystems; Energy Flow in Ecosystems; Biogeochemical Cycles; Photosynthesis and Cellular Respiration; and Aerobic and Anaerobic Respiration.



World History: The Enlightenment, French Revolution and the Rise of Napoleon
Covers aspects of the Enlightenment, the French Revolution and the rise of Napoleon. Was not designed to be an exhaustive resource for European history, but to provide the teacher with additional resources for teaching 18th century world history.

World History: The Industrial Revolution and Imperialism
Focuses on the Industrial Revolution and the Rise of Imperialism in Europe, but also highlights connections with Asian, African, and North and South American history. Provides an additional set of resources to assist in teaching key elements of 19th century world history, but is not intended to be all-inclusive.



U.S. History and Geography: Post-Reconstruction to Present: TN-Specific Resources
Serves as a clearinghouse for online resources appropriate to the study of Tennessee history. Teachers may use this content module's resources in any way that will be most beneficial to classroom needs.

U.S. History to 1960
Serves as a clearinghouse for online resources appropriate to the study of United States history to 1960. Teachers may use this content module's resources in any way that will be most beneficial to classroom needs.

***The following content modules are new for fall 2014*:**
Algebra 1: Solving Systems of Equations and Inequalities
American Literature: Part 1
American Literature: Part 2
Engineering: Solar Energy
Engineering: Rockets
Science: Biology-Cells
Science: Biological Evolution
Statistics: Module A
Statistics: Module B
U.S. History/Geography: Franklin Roosevelt through Barack Obama

We're Here to Help!
Please contact Battelle for Kids' Help Desk at Support@BattelleforKids.org or (866) 543-7555 with any technical questions (log in, password re-set, course access) or for additional assistance.