

Secondary (6-12) Online Learning Resources

Reading

- [The LearnOutLoud.com Free Audio & Video Directory](#) offers a selection of over 10,000 free educational audio and video titles. Our directory features free audio books, courses, documentaries, talks, interviews, speeches, and many other great free audio and video resources.
- [TeenBookCloud](#) is an online database of eBooks and educator resources perfect for your middle school, high school, or public library. We offer a robust selection of Graphic Novels, Enhanced Novels, eBooks, classic literature, National Geographic videos, educator resources, and audiobooks. The collection is available online around the clock. No downloads, no waiting!
- [Purdue OWL](#) is an online writing lab from Purdue University that provides students, particularly those in high school and college, with everything they need to know about writing a paper, including grammar advice and paper formatting guides.
- [Teen Ink](#) - Website devoted entirely to publishing teen writing, art, photos and forums. Offers teens the opportunity to publish their creative work.
- [Biography.com](#) - A well-loved and often-referenced website among biography researchers, Biography.com provides videos, images, extensive biographies, and quick facts on over 7,000 key historical figures.
- [Grammar Girl Podcast](#) - This link will take you to a website where you can access web versions of Grammar Girl's podcast. The page will also tell you how to subscribe to her podcast. Grammar Girl takes grammar and makes it funny, quirky, and easy to remember. **Middle School** [ABookandaHug](#) - Find your favorite books. Every book is an adventure waiting to be opened. Discover your reader personality type and get ready to find your next favorite book.
- [Poets](#) - Poets.org is produced by the Academy of American Poets. The site was launched in 1996, becoming the original online resource for poems, poets' biographies, essays about poetry, and resources for K-12 teachers.
- [No Red Ink](#) - A personalized, interactive site that assists students with their writing and proofreading skills. It was created by former teachers, and it requires an account (free). There is also a cost for a premium version.
- **High School** [Dime Novel and Popular Literature](#) - This collection, created by Villanova University, brings together pre-Pulp era tales initially depicting scenes of early America, the Frontier, and the West. Ranging roughly from 1860 to 1930 these often serial publications record the attitudes of 19th and early 20th Century society: including racist, sexist, and ethnic stereotypes.
- **High School** [Quill](#) requires a registration, but is free for all students. The website provides lessons, tutorials, and writing exercises to help improve a student's grammar, sentence structure, and overall writing. Consider signing up for this easy-to-use, streamlined resource. There are sample activities students may access before signing up to see if it's a website that will be helpful.
- **High School** [UNC Writing Center](#) - A clean, easy-to-use site, the UNC Writing Center

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website is obviously designed for UNC students, but there are still a number of helpful hints, handouts, and tools, especially under the “Tips & Tools” tab.

Multiple Subjects

- [Khan Academy](#) offers practice exercises, instructional videos, and a personalized learning dashboard that empower learners to study at their own pace in and outside of the classroom. We tackle math, science, computer programming, history, art history, economics, and more.
- [CK-12 Foundation](#) is a non-profit organization which aims to increase access to low-cost K-12 education in the United States and abroad.[2] CK-12 provides free and customizable K-12 open educational resources aligned to state curriculum standards.
- [TED Ed](#) provides a huge collection of educational video content to inspire, challenge and enrich students learning experiences.
- [Brightstorm.com](#), high schoolers can use this site for reference. The website is making the textbooks easier for students. They provide help in all subjects from mathematics to science, history and other subjects.
- [AllSides](#) - The AllSides News Page curates daily news stories by topic categories and with left-center-right bias ratings. Issue searches include background articles, thinktank and policy group perspectives, in-person Livingroom Conversation prompts and protocols, and Consider.it online discussion areas.
- [CrashCourse](#), a channel made by John Green and Hank Green, they made a couple great videos on subjects that you may not understand in class. For example, History, Psychology, Statistics, Sociology, and much more.

Math

- [A+ Click](#) provides more than 1000 challenging math problems and illustrations for grades 1-12.
- [Whyville](#) is a virtual world where children ages 8 to 15 play, explore, create and learn together. From solving math puzzles to protecting coral reefs, from programming robots to running virtual businesses
- [Lure of the Labyrinth](#) has been designed specifically to help teach pre-algebra to middle-school students, and it has a rock-solid educational foundation since it's built around the [CCSS and National \(NCTM\) standards](#)
- [Desmos](#) provides hundreds of digital activities covering grades 6–12 and expanding quickly to other areas of math. These activities take advantage of everything that makes computers special. They invite students to create their *own* mathematical ideas and to share their creations with *each other*.

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- [Calculator](#) - free on-line calculator
- [IXL](#) - comprehensive, standards aligned practice activities organized by grade and then subject
- [FigureThis!](#) - practice problems that provide a ton of explanation and help while solving the problem
- [Purplemath](#) - tutoring and practice for all topics
- **High School [Paul's Online Math Notes](#)** - A professor at Lamar University has uploaded his lessons, notes, cheat sheets, and practice sheets from all of the classes he has taught: Algebra, Calculus I-III, and Differential Equations.
- **High School [Get the Math](#)** - A site all about Algebra is used in the real-world: in fashion, sports, restaurants, special effects, and video games. The site also includes interactive challenges related to the fields examined on the site. Includes an introductory video to get you started.

Social Studies

- [CrashCourse](#), a channel made by John Green and Hank Green, they made a couple great videos on subjects that you may not understand in class. For example, History, Psychology, Statistics, Sociology, and much more.
- With [Odyssey Online](#), students will discover Near Eastern, Egyptian, Greek, Roman, and sub-Saharan African cultures with puzzles and interactive games.
- [Global Trek](#) is a way for students to travel the world without having to leave their classroom. The travel itinerary provides links to background information and a chance to read about a country's people and culture. There is even the opportunity to correspond and talk with people in their native language with the help of instant translation.
- [Religions of the World: Photo Collection](#) - This collection contains images categorized by each religion and focus on beginnings, historical development, sacred writings, beliefs, practices, contemporary issues, arts, and the impact the religion has had on history and culture.
- **Middle School [Mysteries of Catalhöyük](#)** - interactive site with information on the neolithic period and lots of activities
- **Middle School [Mesopotamia](#)** - Ancient History Encyclopedia, article with images and videos
- **Middle School [The British Museum: Egypt](#)** - links to material
- **Middle School [Eternal Egypt](#)** - comprehensive site with links to many topics
- **Middle School [The British Museum: Ancient India](#)** - links to information
- **Middle School [The British Museum: Ancient China](#)** - links to information
- **Middle School [The British Museum: Ancient Greece](#)** - short articles on a variety of topics, good graphics
- **Middle School [BBC: Ancient Rome](#)** - links to information about Ancient Rome, specifically in regards to Great Britain

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- **Middle School** [Ancient History Encyclopedia: Byzantine](#) - overview of the time, good graphics
- **Middle School** [BBC: Crusades](#) - multi-page article, good graphics
- **Middle School** [African Kingdoms](#) - variety of articles with videos
- **Middle School** [DK Findout: China](#) - links to many topics, short quiz to test for understanding
- **Middle School** [Mesoamerican ball game](#) - interactive game, requires Adobe Flash
- **High School** The [America's Story](#) puts the story back in history through images of primary source documents, prints, photographs, maps, recordings and other materials from the past. Along with the fascinating information about people, places and things of interest to kids of all ages, there are songs to listen to, a Krazy Kat cartoon to watch, a scavenger hunt and other fun things to do.
- **High School** The [Library of Congress](#) is the largest library in the world, with millions of books, recordings, photographs, newspapers, maps and manuscripts in its collections. The Library is the main research arm of the U.S. Congress and the home of the U.S. Copyright Office.
- **High School** [iCivics](#) allows kids to explore the fundamental concepts and responsibilities of representative democracy through games. Debate a political issue, be president for a day, or just cast your vote in an election.... all from the comfort of your home computer!
- **High School** [CSPAN Classroom](#) - Video-based materials for Social Studies. Access an archive of multimedia material that engages in real world examples of civics in action through inquiry, as well as research and evaluation of primary source material.
- **High School** [Have Fun with History](#) - This resource features dozens of free videos, presentations, vintage filmstrips, newsreels, and other visual resources that can be used to illustrate key historical moments. The site provides a decent overview of time periods ranging from early America through the 1980s.
- **High School** [Digital History](#) - This resource provides information about American history. Students can use an interactive timeline, search by history eras or topics, browse through primary sources, and much more. This is a great tool to use during research or to just learn a little more about American History.
- **High School** [Congress.gov](#) - The official website for U.S. federal legislative information. This site provides access to accurate, timely, and complete legislative information.
- **High School** [The Great War](#) - This YouTube channel shows viewers the history of the First World War in the four years from 1914 to 1918, exactly 100 years ago. The host, Indy, takes viewers back week by week and shows what was going on in the past. Learn more about the Allies and the Central Powers, emperors, Winston Churchill, Wilhelm II, soldiers, battles and of the life aside the battlefield.

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Science

- [NOVA](#) extends its award-winning science reporting both online and in classrooms, producing an extensive list of resources and original content—including short-form videos, science and education blogs.
- [AcapellaScience](#), for catchy music songs about Science, that will stay inside your head for a while.
- [The Periodic Table of Comic Books](#) - Middle and high school students who like chemistry and comic books will enjoy this innovative periodic table of the elements. Created by University of Kentucky chemistry educators Jim Holler and John Selegue, the resource features scanned pages from decades of comic books illustrating characteristics of the elements, such as the “Metal Men” series of comics from the 1960s.
- [PTable](#) - PTable is a website that offers a free, layered, and interactive periodic table. The main page displays the periodic table, which you can click to get Wikipedia definitions. This page is the default, but you can also select WebElements.com definitions, videos, podcasts, or images, including visuals of common products that contain an element (such as older-style batteries, sushi, and vermillion paint for mercury). You can learn about the 18 groups of elements, interactively explore 16 properties and their subproperties, view images of orbitals, list selected or all isotopes, and iterate compounds, plus much more.
- [Faultline—Seismic Science at The Epicenter](#) - Here's everything middle level and high school students need to know about earthquakes, presented through video, graphics, photos, interactive classroom projects, webcasts, and more.
- [Physics Classroom](#) - The Physics Classroom provides resources for learning, practice, and review. The main learning area includes in-depth lessons on physics topics with simple diagrams and questions to check for understanding. In addition to the lessons, the site offers interactives, concept builders, review materials, and more resources.
- **Middle School** - [Natural Selection](#) - Khan Academy, discusses Darwin, evolution and natural selection
- **Middle School** [Animal Adaptations](#) - National Geographic site with video and article on adaptation
- **Middle School** [Nature Works](#) - PBS site, article discusses structural and behavioral adaptations of various organisms
- **Middle School** [NASA](#) - Newton’s laws explained in a clear and concise way, includes graphics
- **Middle School** [Physics Classroom](#) - Comprehensive information on waves and their properties
- **Middle School** [Waves](#) - video with information on types of waves and their properties
- **Middle School** [Solar System](#) - informative material on the planets, includes games, multimedia, activities and crafts

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- **Middle School [Phases of the Moon](#)** - Duckster site with basic information about the phases of the moon, includes a short quiz
- **Middle School [DNA and Genes](#)** - straightforward, basic information on genetics
- **Middle School [Genes](#)** - Kids Health site with straightforward, basic information on genetics
- **Middle School [Punnett Squares](#)** - Duckster's site with information about genetics, with examples of Punnett Squares and a practice quiz
- **High School [BioInteractive](#)** - Biointeractive provides multimedia science resources for secondary and college educators as well as students. Materials include short films, lectures, virtual labs, tutorials, apps, click-and-learns, and teacher guides. This easy-to-use site is filled with an abundance of materials for Chemistry, Ecology, Organisms, Biology, Genetics, Scientific Process, Evolution, AP Biology, and more.
- **High School [The Biology Corner](#)** - Created by St. Louis educator Shannan Muskopf, this website for high school biology teachers and students is chock full of lessons, quizzes, labs, webquests, and other teacher-tested classroom resources for use in introductory life science to advanced placement biology courses. The resources are organized by subject—e.g., anatomy, cell biology, evolution, genetics, ecology, and science methods; within each topic there are a range of materials from simple coloring worksheets that reinforce basic understandings to case studies and investigations that spark deeper learning.
- **High School [Genetic Science Learning Center](#)** - This website from the Genetic Science Learning Center at the University of Utah contains a massive amount of information on genetics. After a "Tour of Basics" covering a simplistic summary of information about DNA, genes, chromosomes, proteins, etc., there are detailed explorations of transcription and translation, heredity and traits, and cells.
- **High School [GasSim](#)** - This modeling and simulation tool can help high school and undergraduate chemistry and physics students develop a deeper understanding of ideal and real gas laws. The app has a database of gas properties for 76 gases, including elements, inorganic compounds, hydrocarbons, and organic compounds. Students can manipulate the temperature, volume, or the number of moles of a selected gas. The simulator then computes the pressure for the selected variable, using three different gas models: the ideal gas model, the van der Waals real gas model, and the Peng-Robinson real gas model. Results appear in both graphs and tables. The User Guide includes screenshots of results from different simulations, giving students a clear picture of the kind of data available from the app.
- **High School [Estuaries: Nature's Water Filters](#)** - This animation demonstrates how estuaries remove toxins, sediment, and nutrients as water flows from land to sea. An interactive pollution game helps enhance students' understanding of what causes decreased water quality and which practices are beneficial to improving water quality.
- **High School [Climate Feedback Fact Checking Site](#)** - Climate Feedback is a worldwide network of scientists sorting fact from fiction in climate change media coverage," states its website.

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STEM

- [The Exploratorium](#) is a public learning laboratory exploring the world through science, art, and human perception. Our mission is to create inquiry-based experiences that transform learning worldwide. Our vision is a world where people think for themselves and can confidently ask questions, question answers, and understand the world around them.
- [Science Friday](#) - Covering the outer reaches of space to the tiniest microbes in our bodies, Science Friday provides free STEM activities, lessons, and resources for all learners, making science fun for everyone! Science Friday will spark students' curiosity at a visceral level, on topics from Frankenstein to the La Brea Tar Pits, and from shrinking polar bears to an online rock collection.
- [Science News for Students](#) - An online publication of the Society for Science & the Public which is dedicated to providing, topical science news for learners. *Science News for Students* publishes award-winning journalism on research across the breadth of science, health, and technology.
- State Education Agency Directors of Arts Education (SEADAE) consists of those persons at state education agencies whose responsibility is education in the arts (Dance, Media Arts, Music, Theatre and Visual Arts)

Fine Arts

- [Artopia](#) is a comprehensive web-based arts experience designed for middle school students, covering the visual and performing arts. Students will learn art history via animated one-minute movies, be guided on how to closely examine important works of art, and view videos of professional artists at work.
- [OK Go Sandbox](#) is an online resource for educators that uses OK Go's music videos as starting points for integrated guided inquiry challenges allowing students to explore various STEAM concepts.
- [Learn to Dance](#) - On [Learntodance.com](#) you will find online dance lessons covering the most famous dance styles including Ballroom, Hip Hop, Belly dancing, Ballet, Irish Step dancing and more. There are tons of free video lessons that are perfect for beginner level dancers.
- [Hoffman Academy](#) - 160 step-by-step, free video piano lessons. Hoffman Academy is designed for beginners with no previous musical experience. Lessons are kept to a manageable length, between 5 and 15 minutes.
- [Music and Performing Arts](#) - Music & Performing Arts combines audio and video that spans all time periods, hundreds of thousands of seminal artists, composers,

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choreographers, and ensembles to provide an unparalleled learning environment for the teaching of music.

- [Codecademy](#) - A free site where students can learn to code interactively. Codecademy offers free coding classes in Python, PHP, jQuery, JavaScript, Ruby, among others.
- [American Association of Community Theater](#) - Learn about the tasks and responsibilities of those who work in theatre.
- [Vocal Warm-Ups](#) - Warming up the voice is important and helpful for professional voice users (singers, actors, and broadcast personalities) and The New York Eye and Ear Infirmary of Mount Sinai Hospital provides some tips and exercises.
- [Rock and Roll Hall of Fame](#) - Information on bands that have been inducted into the hall of fame
- [San Francisco Symphony](#) - interactive games and activities that allow students to learn about orchestras
- [Eyes on Art](#) - This interactive Pacific Bell site is devoted to helping students learn how to look at art.
- [History of Photography](#) - Chronicles the first photographic process of heliography, invented around 1824, to the invention of color photography.
- [Sketchpad](#) - Sketchpad is a non-destructive illustration app featuring a wide spectrum of functionality.
- [High School PhET Interactive Simulations](#) - This website provides hundreds of simulations and experiments in the following subjects: Physics, Biology, Chemistry, Earth Science, Math, and HTML5 (web-coding). Note, many of these simulations require JavaScript, so students will need to access these on desktops or laptops rather than Chromebooks.

World Languages

- [Duolingo](#), a language app to practice your speaking and spelling skills.
- [Spanish for beginners: Learn in paradise](#) Explore Colombian culture as you learn Spanish on a very basic level, learning the most common survival Spanish travel phrases while you follow the story of an American girl arriving in the city of Cali, Colombia.
- [Don Quijote: Spanish Culture](#) - Learn about Spanish customs, history, art, literature, society and much more.
- [Latino's Public Broadcasting Education Collection](#) - Explore Latino art, civil rights, and history with Maryland PBS Learning Media.
- [French Culture](#) - Official site of the French Embassy in the United States, covering books, music, visual and performing arts, film, TV, new media, and tech.
- [Games for Language](#) - Games for Language simply created a free website where students play, learn, and practice.