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Logical Reasoning



Creative Thinking



Research/Exploration



Language Arts



Math



Science



Social Studies



The Arts

# Enrichment Resources Grades 9-12



# Breakout EDU FUN@HOME

Breakout EDU has put together a collection of digital breakout games that may be played at home. Choose from a list of games created for high school students and put on your thinking cap. Just as in real-life escape rooms, it's essential players make careful observations and put clues together to draw logical conclusions.



Attempt thousands of free mazes, logic, sudoku, and kakuro puzzles – among others. All puzzles are printable.



Check out these challenging mazes, hybrids, puzzles, and logic problems.

## sunday puzzle




Will Shortz, NPR puzzlemaster and editor of NYT crossword puzzles, gives a weekly quiz to one on-air listener and issues a challenge to those at home. Listen to past puzzles here.



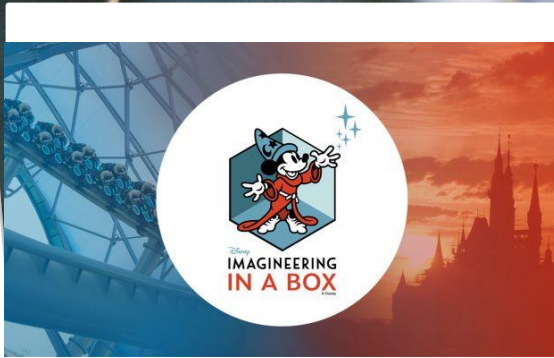
Tackle or compete in solving a wide variety of puzzle types. Puzzles available here or via Puzzle Baron's apps.

# Logical Reasoning

# JOHN SPENCER



Design a city in the sky, underground civilization, drone delivery system, arcade game, and more. Check out John Spencer's Maker Challenges.



Explore character and ride development with Disney and Khan Academy as you design your own theme park.



Creativity and mathematics collide as you explore filmmaking and animation with Pixar and Khan Academy.

## 32 Easy Exercises to Boost Your Creativity Every Day

You don't need to be a talented artist to pick up a creative habit. 

Choose from these simple off-screen activities to strengthen your creativity. Think creativity is only visual? Try some of these drawing, verbal, musical, and even mental tasks to develop creative habits.



the iris Behind the Scenes at the Getty

Join creative minds across the globe in recreating Getty artworks--using only everyday household items.

**TED** Ideas worth spreading

TED is a non-profit focused on spreading ideas through short talks given by people in all disciplines and from all cultures. Explore and listen to talks on a variety of issues and consider producing your own talk with “ideas worth spreading”.



Tour famous museums around the world from your own home.



Have a rainy or otherwise dull day? Consider a Wonder Day project. John Spencer guides you through investigating questions you probably won't answer in school.



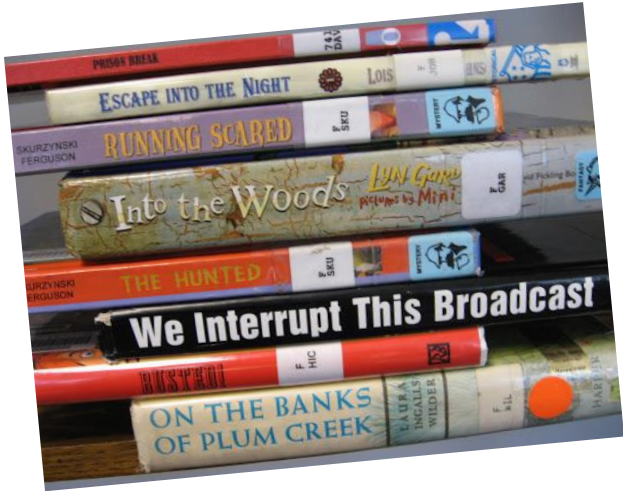
Download the Google Expeditions app and explore the world through virtual and augmented reality.



Take a “crash course” in a wide variety of topics, including sociology, artificial intelligence, film history, economics, and the novels of Toni Morrison.

# Research/Exploration

Photo by [João Silas](#) on [Unsplash](#)



Learn how to create book spine poetry—not poetry you write, but poetry you find. Read this post by Marquette University staff member Lisa Mazzie and consider creating your own.



duolingo

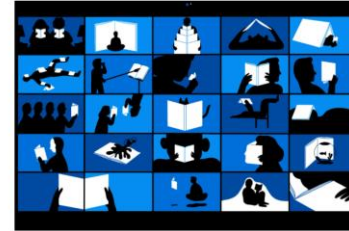
Learn a language—for free. Play games, earn points, and start new levels as you master vocabulary and skills.



Access student writing in response to NYT picture prompts, student opinion questions, and current events prompts. Anyone under 18 must have parent permission to create a NYT account and submit writing.

#### Our 12th Annual Summer Reading Contest

Middle and high school students are invited to tell us what they're reading in The Times and why. The contest begins on June 11.



The NYT Learning Network challenges you to become more aware of the world, explore sophisticated non-fiction, and write for an audience. Join this contest, and you may see your thoughts published. Get free digital access as a high school student.



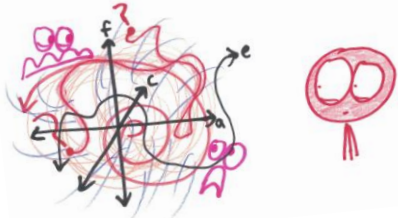
Hoagies provides reading lists for gifted individuals of all ages. Find a wide variety of topics by interest, gender, and social-emotional issues.

# Reading/Language Arts

Photo by [Nguyen Thu Hoai](#) on [Unsplash](#)

## Math with Bad Drawings

Lover of math. Bad at drawing.



A 9-year-old scrawls an innocent problem... and suddenly 3D surfaces are intersecting in 4D space.

Check out Math with Bad Drawings—strategic paper and pencil games, geometry puzzles, and a multitude of clever math cartoons. Feeling creative? Create a math cartoon of your own.

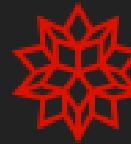


## CARIBOU CONTESTS

While there are several more live contests running through the year for a fee, you can challenge yourself with free versions of past competitions on their website.

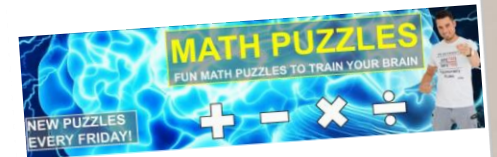


Challenge yourself with daily 8x8 or 9x9 puzzles. Raise the level of difficulty for added challenges. Check out the daily NYT KenKen puzzle for an additional challenge.



**WOLFRAM**  
COMPUTATION MEETS KNOWLEDGE

Wolfram/Alpha presents famous math problems, solved and unsolved. Some theories were disproven after hundreds of years, and some remain unsolved. Enjoy exploring these problems.



Check in each week for a new puzzle to challenge your mathematical reasoning. These are sure to make you think. All solutions are provided and explained.



Explore resources and interactive activities on a variety of genetics topics. Topics include breakdowns of genetics, cell biology, plants, ecology, evolution, human health, and neuroscience.



**BrainCraft** ✓  
509K subscribers

BrainCraft with Vanessa Hill is a YouTube channel focused on psychology and neuroscience. Vanessa discusses topics such as how to form habits that stick, why we can't stop snacking, and why everything takes longer than we expect. Check out her recent video on why March 2020 was the longest year ever.



Engage with articles, videos, and hands-on simulations and activities in biology, ecology, conservation, earth science, climatology, and geology. Search resources by grade level and content area.



View NASA video clips to learn more about various astronomy topics, focused on the real-world mathematics that's involved.



Science Journal for Kids and Teens provides hundreds of scientific articles that are peer-reviewed and adapted for students. Filter articles by reading level and scientific field. There's much to explore.



Check out these games created for middle and high school students. Run a law firm and test your knowledge of constitutional rights, prepare to vote, or run your own presidential campaign. Or, consider fighting hidden ads, viral deception, and false reporting as a NewsFeed Defender.



The New York Times provides daily discussion questions and extension activities based on current events. Challenge yourself with recent ones or search topics of interest.



GeoGuessr requires an account to play, but users may play one free game every day. As a family, enjoy exploring locations of cities and famous places all over the world.

KQED  
YOUTH MEDIA  
CHALLENGE

[learn.kqed.org](http://learn.kqed.org)



KQED Learn is a free platform for middle and high school students to tackle big issues and build their media literacy and critical thinking skills in a supportive environment. Join a Youth Media Challenge to engage student voice and choice and foster civic engagement.



Explore the UN Sustainable Development Goals created in partnership with Unicef. Consider one or more of the student actions provided on topics such as poverty, economic growth, education, or equality.





Create your own music with Google Chrome's Music Lab. Add notes by clicking a grid and share songs with a link. Experiment with different instruments, tempos, scales, and ranges.



Explore highlighted art collections, by category, or by time and color. Scroll to the bottom to view popular topics. Parental guidance is recommended.



Pro Audio Essentials is a game-based course for music producers to practice and improve audio skills. Explore equalization, compression, and digital audio basics.

## *the* ART ASSIGNMENT

The Art Assignment is a PBS video series that introduces you to innovative artists, gives you assignments, and explores art history through the lens of the present. Browse assignments. Then, watch the videos and complete the assignments that interest you.



Read about several photo competitions major companies provide for children. Basic information and links are provided.