

What we know about HS learners

- Apply complex **reason**, make educated guesses, and sort fact from fiction
- Problem solving with **hypothetical situations**
- Develop a strong sense of right and wrong (justice) and make decisions based on following their conscience
- Write with complexity about a variety of content areas (science, social studies, literature) -
- Use strategies to search for, use, and compare information from multiple sources
- Use numbers in real-life situations (like calculating tax or a tip)

Activity Ideas

Based on the learner characteristics of high schoolers, these activities support **independent**

1. Application of critical thinking skills to cross-content, real-life situations
 2. The exploration of enduring themes in history
 3. The exploration of phenomena in science.
 4. Self-directed projects
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1. Apply Critical Thinking Skills

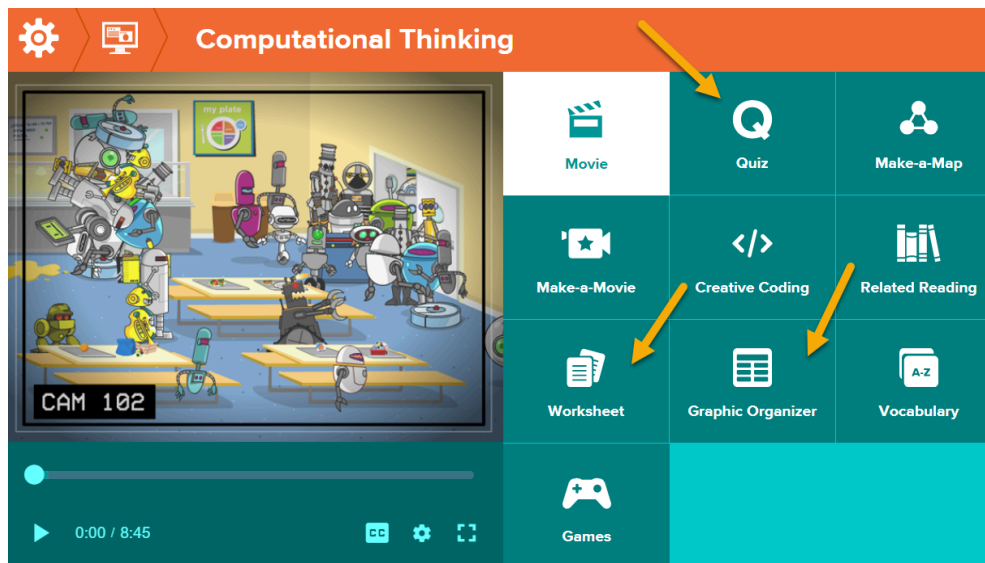
Review critical thinking skills and how to use them by exploring topics including:

- [Critical Reasoning](#): Not all arguments are created equal--learn how to spot the good ones and reject the bad ones!

- [Computational Thinking](#): Computational thinking—it's not just for computers! Learn how to use it to tackle all kinds of complex problems.
- [Concept Mapping](#): Learn to connect ideas with linking phrases and discover new cross-links that enhance your overall understanding of the topic.

Challenge Your Thinking:

- Take the quiz and/or complete the Graphic Organizer and Worksheet for one or more of the topics above. What was easy? What was most challenging?



- Play games that tap into critical thinking skills, such as [Quandary](#) and [Community in Crisis](#). While playing, pay attention to the conversation you're having with other players, or even in your own head. What decisions are you making? What thinking skills are you using?

By the Numbers:

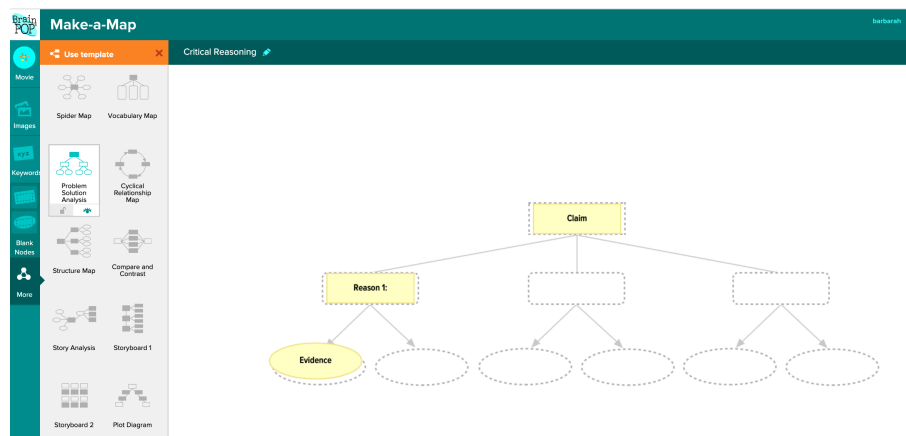
Apply your critical thinking skills to math topics like [Equations with Variables](#), [Multiplying and Dividing Exponents](#), [Distance, Rate, and Time](#). After watching, create real world scenarios on each concept, and challenge friends and family members to solve them! For example:

- Do You Have the Facts?
 - **Distance, Rate, and Time:** Research the speed of the fastest insect and birds. Graph the distance traveled by the fastest insect and fastest bird moving at max speed over six hours. At what height would the fastest bird need to begin its dive in order to survive?
- Math and Music

- **Multiplying and Dividing Exponents:** Listen to the Stevie Wonder song “As,” pausing at the lyrics “Until the day that eight times eight is four.” Using exponents, find the power of eight that justifies this lyric.
- Math and Movies
 - **Equations with Variables:** In the movie “The Curious Case of Benjamin Button,” Ben’s age decreases twice as fast as your age grows. In the year 2020, Ben is 100. What year will you and Ben be the same age?

Bring Out Your Inner Teacher:

- Create your own quiz--on or offline--featuring one of the critical thinking skill topics listed above.
- Create a partially completed concept map using BrainPOP’s Make-a-Map tools and have a family member complete it. Ask them to explain their reasoning and give them feedback!



2. Explore Enduring Issues in History

An enduring issue is a challenge or problem that societies have faced and debated or discussed over time, attempting to address or solve the issue with varying degrees of success.

BrainPOP offers many topics that touch upon enduring issues. Following are just a few examples but there are so many more! Explore these then as a challenge go on a hunt for more and share what you find with a friend.

- Equity Issues/Lack of Access
 - [Civil Rights](#), [Jim Crow](#), [Feminism](#), [Communism](#)
- Conflict & Power
 - [War & Revolution Topics](#), [Ottoman Empire](#)
- Scarcity
 - [Industrial Revolution](#), [World War I](#), [Causes of World War II](#), [World War II](#), [Cold War](#),

- Innovation -
 - [Industrial Revolution](#), [Internet](#), [World War I](#), [World War II](#),
- Environmental Impact
 - [Climate Change](#), [Population Growth](#), [Industrial Revolution](#), [Agrarian Revolution](#)

Make Your Case:

Explore the topics for one of the enduring issues listed above, including watching the movies, reading the Related Readings, etc. As you learn about the issue, consider the various solutions proposed over time. Use Make-a-Map from one of the topics to take notes, then identify the solution you support. Debate the issue with a friend or family member who has an opposing opinion, using the evidence you collected to support your position.

Your Make-a-Map should include the following:

- Your enduring issue and with a brief description
- Evidence from the movies and Related Reading articles about the issue, how its affected societies over time, and ideas for solutions
- Nodes, connections, images, movie clips, keywords and coloration
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Play with History: The cause-and-effect relationship inherent in historical events are greatly influenced by decisions of leaders and other key figures.

- Play [Quandary](#) and make ethical decisions that impact a society. Then explore a topic in the [Historical Figures](#) in which the featured person had to make similar decisions.
- Choose an [iCivics game](#) and take note of the decisions you make. Identify a current event in which similar decisions were made. Anticipate the outcomes.
- Put history in order with the [Time Zone X](#) game. With a family member or friend, choose a topic and play the game together. Find two events that are connected by cause and effect. Discuss that relationship with your game partner: "What decisions did an historical figure make that lead to these two events being connected?"

3. Investigate Natural Phenomena Natural phenomena are observable events that occur in the universe and that we can use our science knowledge to explain or predict.

Below are examples of natural phenomena along with BrainPOP topics that address them. But these are just the tip of the iceberg! Explore these then as a challenge, hunt for more topics that explain or predict phenomena, and share what you find with a friend.

- Identical fossils and geographic formations exist on the coasts of continents separated by vast oceans.
 - [Earth's Structure](#), [Plate Tectonics](#), [Earthquakes](#)
- Certain diseases are more prevalent in our community than others.
 - [Body Systems](#), [Homeostasis](#), [Lyme Disease](#), [Diabetes](#)
- Extreme natural disaster events are increasing.

- [Climate Change](#), [Ocean Currents](#), [Droughts](#), [Wildfires](#)

Think Like a Scientist: Select a natural phenomenon you want to investigate. List everything you know about the phenomenon then develop a hypothesis for **why** the phenomenon occurs. You can use a [web organizer](#) or BrainPOP's Make-a-Map tool to organize and develop your hypothesis as you explore phenomena-related BrainPOP movies and Related Readings in topics above or others you find.

You'll see that some topics have an accompanying [science simulation](#) for deeper understanding of the phenomenon. Try it out!

4. Self-directed Projects

- Select a BrainPOP topic on an important person, such as an author, Nobel Prize winner, poet, scientist, etc. Use the search field in BrainPOP to find a person of interest. Then use a [storyboard](#) to plot out a movie that gives an alternative perspective from what is represented in the movie.
- "Related Topic" exploration.
 - Choose a topic. View the movie and explore Related Readings.
 - Use Make-a-Map to identify key ideas and connections.
 - Scroll below the movie player to see topics related to your chosen topic. Think about why those topics are related to your topic. Then choose one or more to explore. Add new connections to your concept map.
 - Keep exploring related topics and adding new connections to your map!