



Computational thinking teaches students how to engage with our world

Computational thinking teaches students to apply strategies that computers use to solve real-world problems. The seven computational thinking strategies equip students with valuable problem-solving skills such as finding patterns between events and making meaning from data. As a social studies educator, you know that these skills are core competencies. These engaging and fun standards-aligned resources give you the tools to integrate computational thinking into your social studies classroom.

Computational thinking strategies:

Collecting data—how to find the right information

[Interactive Population Map by the U.S. Census Bureau](#)

Whether it's in the form of surveys, interviews or government records, data helps us tell a story. The United States Census of 2010 provides data about American society via an interactive map and downloadable summary files. Students use the map to locate specific districts and localities and find data on population, race, ethnicity, age/sex, and household information. Student can use this resource to collect data about their own location or a larger area, and produce a secondary source document.

Connect to: [Primary and secondary sources](#), [interpreting data](#)

Analyze data—interpret data to find relationships and predict outcomes

[American Memory Timeline from the Library of Congress](#)

The *American Memory Timeline* has links focused on specific time periods in history. Students can create timelines or cause-effect charts in order to analyze social structures, technologies, and significant events. For more models of historical timelines and analysis of cause and effect of historical events, use the search terms "timeline" or "cause and effect" in the page's Search function.

Connect to: [Interpreting data](#), [cause and effect](#), [constructing event sequences](#)

Decompose—solve a complicated problem by breaking it into smaller pieces

[American Memory from the Library of Congress](#)

Decomposing the vast subject of history into smaller parts or subtopics makes it more accessible to students. *American Memory* by the Library of Congress showcases a wide range of subjects including African American history, women's history, American Indian history, war, religion, government, and others. Guide students through a selection of primary and secondary sources and discuss how it informs their understanding of the period or U.S. history as a whole. Have students decompose your current topic of study into smaller parts, and have each research and present history through that lens.

Connect to: [Primary and secondary sources](#), [conducting research](#), [examining a topic](#)

Find Patterns—identify themes and connections

[Library of The World Factbook \(U.S. Central Intelligence Agency\)](#)

Identifying patterns helps students make sense of society, government and history. *The World Factbook* published by the Central Intelligence Agency (CIA) provides information about a majority of nations. Information on each country covers geography, society, political structure and economics. Students can select fields by which to compare countries on measures such as geographic size, population, unemployment or crude oil production. Students can identify patterns in the data within and between countries, and use these patterns to make predictions or to support opinions about event causes or government policies.

Connect to: [Crafting structured arguments](#), [identifying patterns in data](#)

Abstract—remove details to see the big picture

[Branches of Government from USA.gov](#)

Reducing complexity helps students understand complicated topics like the U.S. government's systems of checks and balances more clearly. USA.gov contains information about how the three branches of government work, what services they provide and resources for citizens. Students can research the three branches of government and reduce detail from their findings to explore how checks and balances work in the U.S. government and compare that to the government of another nation. Extend learning on the topic by engaging students in debate about the balance of power in government throughout history or other potential applications of checks and balances.

Connect to: [Comprehension and collaboration](#), [making connections](#), [delineate and identify arguments](#)

Build models—test, experiment and simulate

[Types of Maps \(Penn State University\)](#)

Students can engage with history and understand how perspective shapes our understanding by creating maps. The Penn State resource "Types of Maps" includes a wide array of reference maps spanning topics from topography to media and technology. Students can build their own map by sketching, building a physical scale model or utilizing computer software. These mapping resources can help students connect and engage with models of their own communities:

- [The National Map \(U.S. Geological Survey\)](#)
- [Interactive Maps from the Census Bureau](#)
- [Maps of Employment \(Bureau of Labor Statistics\)](#)

Connect to: [Analyzing motives and perspectives](#), [understanding point of view](#)

Develop algorithms—create thorough step-by-step instructions

[America's Founding Documents from the National Archives](#)

The *Charters of Freedom* provide an algorithm for the rules of government of the United States of America. Guide students through the primary source documents and secondary source articles and discuss the purposes of the various rules and procedures. Engage them in creating a charter for their own government by creating an algorithm, or set of instructions and parameters. Student can learn more about the U.S. Government, and other countries' governments, as these sites:

- [Ben's Guide \(U.S. Central Publishing Office\)](#)
- [The World Factbook \(U.S. Central Intelligence Agency\)](#)

Connect to: [Writing narratives](#), [identifying key steps in a process](#)